ONLY 58p

Issue 70 • 10 March 1990

NEW COMPUTER EXPRESS

BRITAIN'S BIGGEST SELLING COMPUTER WEEKLY

AMIGA

- Amazing astronomy
- Ultra Design pro CAD
- Typhoon Thompson

ST

- June Atari show
- Mekon's laser
- Rainbow Islands

PC

- Pirates jailed
- Optical card reader
- CBM Apricot bid?

CPC

- Comic book capers

BBC

- Sim City soon

C64•PCW•XE SPECTRUM QL•ARC•MSX

SPECIALIST COLUMNS

THE GREATEST EVER GRAPHICS?

Does Space Ace really stack up?

Turn to page 58 and find out...

ATARI SPRINGS ST SURPRISE

Express uncovers secret plans for three new bundles

All is revealed on page 3

THE PINT THAT GOES TO YOUR HEAD

Those weird Guinness records are coming to your computer. Pure genius?

- see page 54

MODEMS, PRINTERS & PORTABLES

Read Shopping Express for 28 pages of Britain's best computer bargains

9 770957 064004 10

CONTENTS

FEATURES

IT'S A RECORD 54
...Well, a CD actually. The book of human silliness from the brewers of law suits is now on computer

SMARTER THAN YOU THINK 57
The credit card in your pocket could soon out-process your Amiga!

ACE IN SPACE 58
Games from Laserdisc raise the quality of 16-bit graphics

REGULARS

NEWS 2

COMMENT 8

BUYER'S GUIDE: MODEMS, PORTABLES & PRINTERS 23
Hardware buying advice from the experts

READERS' CLASSIFIED ADS 32
Hundreds of second-hand bargains

EXPRESS SALES 36
The place to shop for the best for less

JOBS 42
Need a new job? Look no further...

PC GUIDE: SHIFTING YOUR DATA 49
Our inside-the-PC series tells you how to move your data to your new PC from your old machine

TECH TIPS 61
The manual from Uncle

LETTERS 65
Have your say in the computing world's top debating chamber

YOUR MACHINE

PC compatibles 10
Atari ST 12
Commodore Amiga 14
Sinclair Spectrum 16
MSX-compatibles 16
Amstrad PCW 16
Amstrad CPC 17
Commodore 64 17
Sinclair QL 18
Atari XE series 18
BBC B and Master 18
Acorn Archimedes 18

SOFTWARE PIRATES GET JAIL SENTENCES

Two men are currently whiling away four months in one of Her Majesty's prisons – for copying software.

Francis Johnson and Christopher Swallow pleaded guilty to charges of criminal deception and breach of copyright at Staffordshire Crown Court, and were sentenced to four months imprisonment each for illicit copying of computer software.

The men had been trading under the name Alpha Omega Business Systems, which was supplying copies of programs from such companies as Systems Union, MicroFocus and WordStar International.

Acting on information supplied by Systems Union, the Federation Against Software Theft and Staffordshire Police Fraud Squad swooped on Alpha's offices. They found what they described as an Aladdin's Cave of illegal software.

Systems Union marketing director Herman Bruce warned others of the perils of computer software piracy. He stated: "I hope that the stiff sentences imposed on the offenders will serve to highlight the serious nature of the offence and help stamp out piracy." ■

American professor predicts end to virus chaos

VIRUS SHIELDS WILL PROTECT COMPUTERS

All computers in the near future will come with built-in virus shields, ending years of troubles wreaked by the rogue programs.

That's the prediction of Professor Lance Hoffman, head of computer science at the George Washington University of Washington DC. He says the virus problem will become so ferocious over the next few years that users will demand protection at all levels.

"By the end of the decade we're going to see an increase in the number of viruses and a change for the worse in their nature," he told *Express*. "I can see another Chernobyl, triggered by a computer virus, just waiting to happen.

"It all depends on the way things go, but virus shields will be in place by the end of the decade."

He predicted that the shields would be designed so that even the most ingenious types of viruses and Trojan horses would be foiled.

Despite apocalyptic predictions, he has also warned against getting the virus threat out of proportion. "We should keep them in perspective. Just as the killing of innocent hostages by terrorists has more psychological impact than the same number of deaths on the highway, someone with a disk trashed by a virus may be more irate than someone who loses eight hours work because of an electrical failure."

Meanwhile, according to on-line news agency Newsbytes, a computer virus which urges the legalisation of marijuana has appeared on governmental computers in Canada.

The virus appeared on 34 PCs at the Canadian House of Commons. Without any apparent trigger the message: "Your computer is now stoned. Legalise marijuana" appeared on monitors. The virus itself does not appear to be harmful, although it is difficult to wipe it off the system. ■

• Space Ace: *more superb laser graphics from Bluth to come*

Dragon's Lair sequel due this year

A new version of the hit interactive cartoon *Dragon's Lair* is to be launched later this year.

Dragon's Lair II will once again squeeze amazing graphics from the ST and Amiga, but there are also PC and Macintosh versions in production. *DLII* has been produced by Don Bluth and Readysoft in Canada, also responsible for the highly-acclaimed *Space Ace*.

The first *Dragon's Lair* began life as a Laserdisc arcade game six years ago – way ahead of its time. The images from that disk were digitised and transferred to magnetic media.

The second game will be released this autumn and it is understood that an arcade version of the game is to be launched by Nintendo which holds the rights. In the meantime, interactive cartooners will just have to sit tight until the new adventure arrives. ■

• Bluth's methods are analysed on page 58.

***• Bros: celebrating a high score on* Super Mario Brothers.**

Name game

Some pretty wonderful people are getting into the joys of gaming. According to Nintendo, its list of 63 trillion squillion subscribers includes teen popsters Bros.

Apparently Matt and Luke aren't the only famous bods who enjoy a good blast. Others include Michael J Fox, Don Johnson, Henry 'The Fonz' Winkler, Bruce Willis, Matthew Broderick, Whoopi Goldberg and Goldie Hawn.

One fascinating inclusion in this veritable hall of fame is Robin Givens – ex–love of erstwhile boxing champ Mike Tyson. Could she be giving Mikey a pseudo bashing in hit game *Mike Tyson's Punch Out?* ■

'Discovery' ST at £299 • STE at £399 • 1040STE bundle at £499

ST PACKS REVAMPED FOR SPRING OFFENSIVE

AN EXPRESS EXCLUSIVE

Details of Atari's secret plans for the ST's immediate future have been uncovered by *Express*.

Within the next fortnight the firm will announce a new initiative designed to make the ST "the best entry-level option on the market". The firm is to sell its STFM machine for £299, with an attractive bundle incorporating not just games but also more useful packages to "really get the first-time user started". Like a previous entry-level ST bundle, it will be called the Discovery Pack.

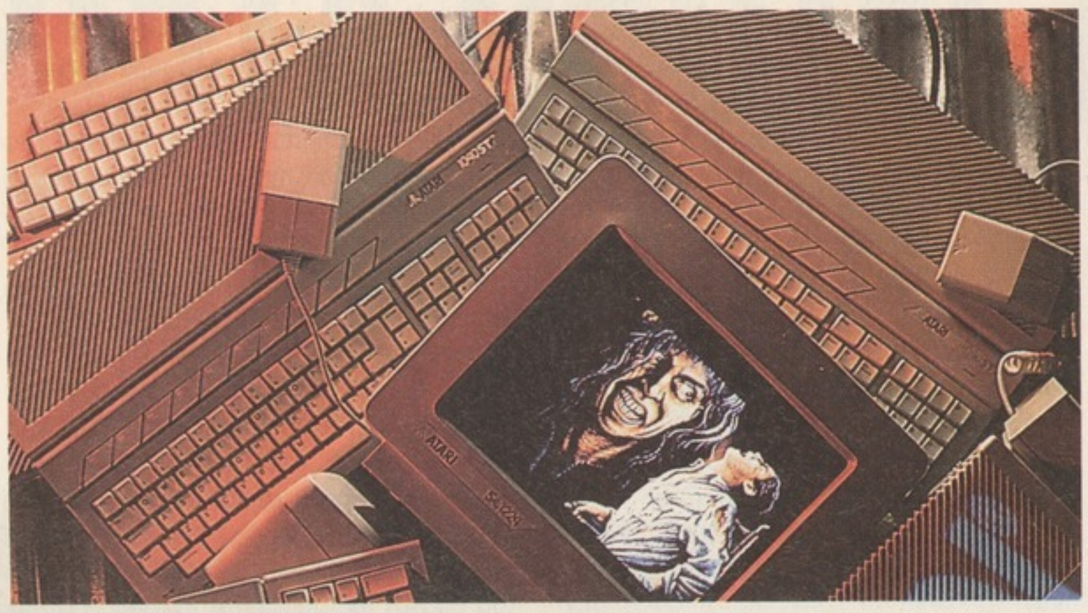
An intriguing approach is also to be taken with the new STE. That will cost buyers a £100 premium, retailing at £399. Purchasers of the 'Amiga beating' STE will not be offered the extra goodies which make the entry-level option so attractive.

However, for £499 upgraders will be offered a 1040STE along with up to £400 worth of Kuma professional software, making it a complete system for serious users.

Current bundles allow ST buyers to choose between a bare system for £299 or the successful Powerpack for £399, with no difference in treatment between the STFM and the STE.

Insiders at Atari say anyone who has already bought an STE – either with or without the extras – can "count themselves lucky". The firm says that, despite initial incompatibility problems with leading software packages, the upgrade is now fully operational.

The Discovery Pack will come with five games – there's also a paperback book called *Discover Your ST* which will help inexperienced computer users get to grips with the new machine. A disk-based tutorial is also included.



• *ST: new approach to bargain bundles.*

However, added to this are a number of extra packages, the nature of which is a closely guarded secret within Atari Towers. The company is anxious that news of the new pack should not damage sales of those machines currently in retail and distribution channels.

Atari had hoped that this new plan would herald the arrival of the STE. However, a dock strike at Folkestone before Christmas and general shortages of STs meant the firm had to fly 20,000 STEs into the country to satisfy demand.

Therefore, buyers had a 50:50 chance of receiving an old STFM or the new STE. The advantages of the newer machine's technical specifications now appear to outweigh the disadvantages of incompatibility problems, experienced by 'premature' STE owners.

Clearly, Atari is hoping to steer serious buyers toward the value-added £499 pack. For an extra £100 STE buyers are being offered a bargain in terms of the extra software and memory.

Reluctantly commenting on the leak, UK managing director Bob Gleadow told *Express*: "What we want to do is position the 520ST as a first-time buyer's machine. We're trying to separate first- and second-time buyers with an attractive £299 package and another at £499 where we'll be looking to sell the 1040."

He said he believed the new ST package would be better value than even lower priced 8-bit machines. ■

• In next week's *Express* there is an exclusive interview with Atari UK's Bob Gleadow.

Atari shows its stuff

Atari is to stage its own show based around the company's full line up of products – from the Lynx hand-held games machine to the ATW transputer.

The event is to be held at the Hammersmith Novotel in the first weekend of June. It's the first time Atari has organised the show since Database Exhibitions scrapped its Atari Show late last year.

Atari is hoping to offer enthusiasts not only the chance to pick up bargains from the usual box shifters but also an opportunity to see the firm's plans in full.

It will be based on two floors. Visitors upstairs will be offered the chance to enter an 'Atari workshop' where various hardware technical boffins and software developers will be on hand to "help you get the most out of your machine".

There will also be a DTP section – an area to which Atari is attaching much importance. There's also a chance to fiddle around with prospective purchases such as the Portfolio and Lynx or simply look at more expensive articles like the TT and ATW transputer. Atari-related software and hardware bargains will be situated downstairs.

Entry is a respectable £2 per person or £4 for a ticket covering families of up to four members. ■

Pop video fun for the Bitmap Brothers

Computer graphic experts The Bitmap Brothers have been sought out by pop band Oh Well to add some pretty colours to a new promotional video.

The video for new song *Radar Love* features Amiga-generated graphics overlaid on real footage. Director James Le Bon often uses such effects on his work – this time though he decided it was time to opt for computer graphics rather than hand-drawn overlays.

The Bitmaps used an Amiga with extended memory and an accelerator board to generate on-screen ripple effects. Computer graphics are to feature more and more in pop videos, mainly because of the relatively low cost of such productions. ■

• ***Left:* Radar Love *gets Amiga-aided graphics.***

Best seller

***New Computer Express* has been confirmed as Britain's biggest selling computer weekly.**

Official sales figures from audit body ABC put average weekly sales at 22,277 for the period July to December 1989. That's more than 50 per cent higher than any magazine operating within the same market. *Express* sales this year are already running at several thousand above the ABC figure.

Many thanks to all our readers. ■

Cracking crackdown

The anti-piracy group FAST is to announce a new set of measures aimed at combating software theft.

Details of the schemes, which are intended to help catch thieves, will be announced this week. It is expected that they will be based on projects which have been developed in the US and Canada. ■

Aussies pick Which

Ten Australian companies will be setting up a special series of stands at the forthcoming *Which Computer?* Show exhibiting a series of products not seen before in the UK.

The firms are bringing hardware and software solutions up from Oz where they've already been successful. They're hoping that their goodies will generate enough interest to warrant UK launches and distribution deals.

One product from Datapac International is a multi-user operating system for PCs allowing up to 23 people to operate from a single PC.

There's also a personnel management solution from Frontier software which allows companies to extract, sort and file information about employees.

Add to that an anti-hacking device, a board which turns a 286 into a 386, and a series of voice-mail products and you have an intriguing selection. It's all been organised in conjunction with the Australian Trade Commission.

The *Which Computer?* Show will be held at the National Exhibition Centre in Birmingham in April. ■

Sensational $35 million bid for UK computer firm

COMMODORE TO BUY APRICOT HARDWARE?

Commodore is believed have put in a bid for the hardware business of veteran UK firm Apricot.

Apricot is understood to be considering bids from up to a dozen prospective buyers, including Epson and Acer. However an American company, believed to be Commodore, has pitched in with a reported bid of $35 million.

According to influential trade magazine *MicroScope*, that bid is likely to be successful, giving the buyer a large chunk of one of the UK's most famous computer companies.

A decision will probably be taken within a month – the end of Apricot's financial year. If Commodore does buy the hardware business then it will have access to a wide range of middle to high-end PC products, as well as the famous brand name.

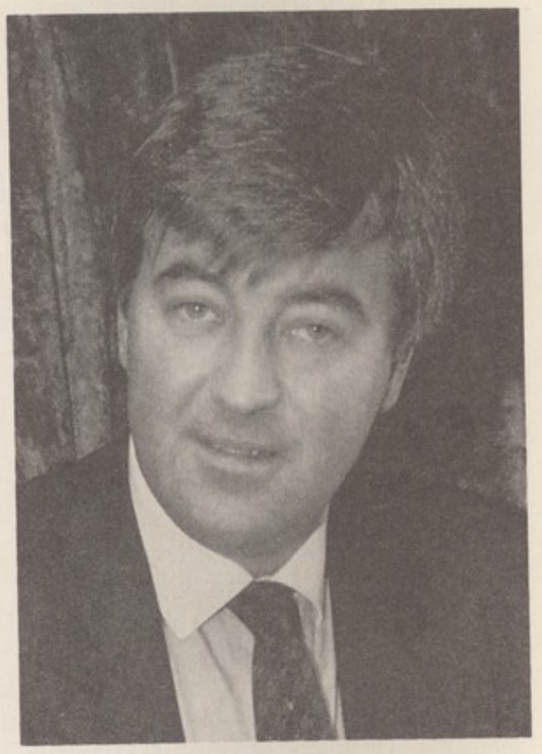
The firm would also have access to top-end business currently enjoyed by Apricot and access to contacts in the public and corporate sectors, both of which have long been eyed enviously by Commodore in the UK. There would also be UK manufacturing facilities. All this could be slotted in to the new Systems Division.

However, neither firm is prepared to comment on the matter at this sensitive time. Commodore UK managing director Steve Franklin has given a firm "no comment" on the matter and has refused to either confirm or deny any possibility that Commodore has put in a bid.

However, he told *MicroScope* that the firm did intend to introduce EISA and MCA standard machines in the near future – an area in which Apricot has already dabbled.

On Commodore's ambition at the top end of the computer market Franklin said: "Admittedly we have only about 0.1 per cent of the corporate market in the UK, and we need to get to 5-8 per cent to become a serious player. We have plans to do just that."

Apricot's communications director Jes Dorrell was also unwilling to give details, restricting himself to a confirmation that the firm is in negotiations with "a number of parties".



• *Franklin: ambitious*

If Commodore does buy Apricot's hardware division it will be the most important purchase since Amstrad bought the Sinclair name. ■

New chip aids micro movies

On-screen multimedia images will soon be greatly improved following the release of a new chip which can compress images by a factor of 200, *writes Jerry Glenwright*.

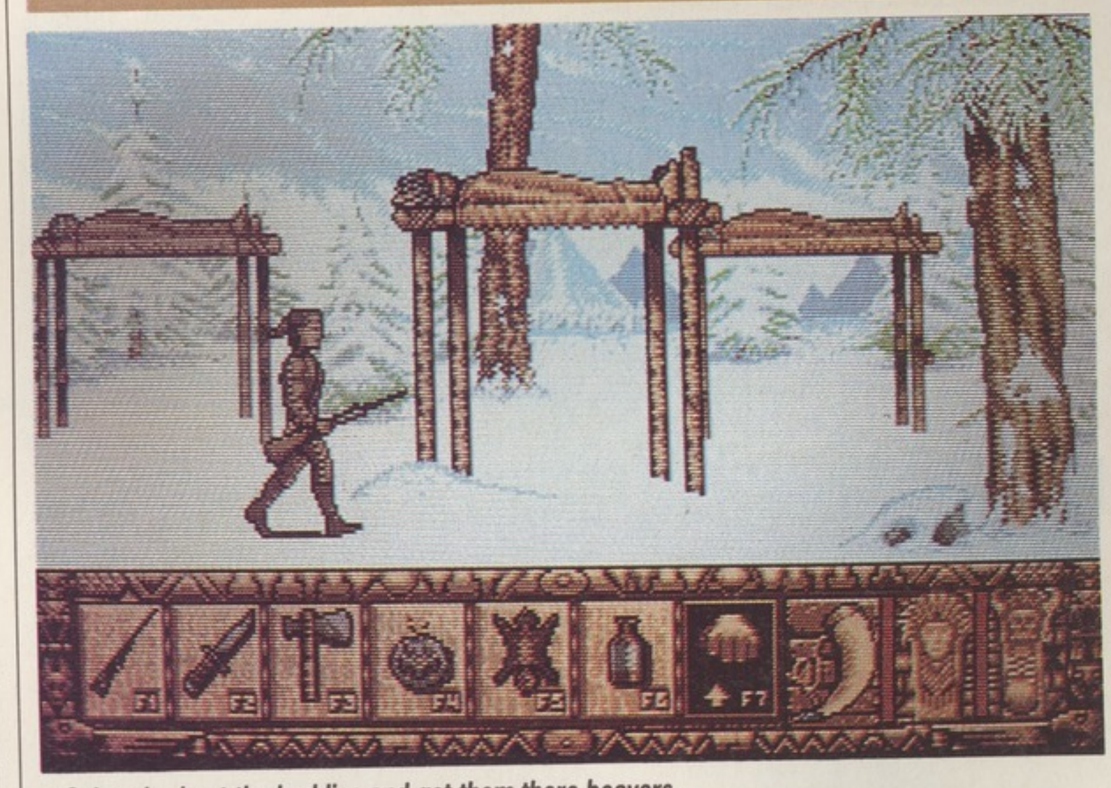
Until now, the use of high quality still and motion pictures in computer applications was severely restricted due to the heavy demands on memory, and the processor time needed to store and manipulate them. Today's compression algorithms use 800Mb of hard drive space to store just 20 minutes of motion pictures from video tape.

However C-Cube Microsystems, an American consumer electronics company, has perfected a VLSI (very-large-scale integration) chip which reduces each colour image to half a percent of its former size, enabling far more frames to be stored and viewed.

The CL550, as the new chip is known, is the first to implement the joint Photographic Experts Group standard for image compression, in an attempt to create one standard that can be used throughout the image processing industry. "We believe the JPEG international standard for image compression, and the CL550 will open vast opportunities in the multimedia marketplace" said C-Cube's president Edmund Sun.

Desktop computers equipped with a CL550 will be able to store, edit and transmit entire photographic-quality movies over local area computer networks, greatly improving the computer's primary role of providing information.

The CL550 will be widely available by June, with a bulk-deal price tag of $155. Contact C-Cube on 0101 408 944 6300 for further information. ■



• *Colorado: beat the baddies and get them there beavers.*

Trapping the games player

French software company Silmarils has hit the UK with a new adventure game called *Colorado*.

It traces the wanderings of a trapper in the 19th Century who is stuck out in the wilds with quite a lot of baddies to contend with.

There's lots of canoeing and shooting and other such activities, as well as a few logic problems to solve.

It's the first game to come out of a distribution deal between Silmarils and UK firm Palace.

Colorado is out next month, with versions for the ST, Amiga and PC costing £24.99. ■

Channelmark's Power change

Channelmark UK – the firm behind the low-cost business accessory software range *Power-Up* – has changed its name.

Not entirely surprisingly the company is now to be called... Power-Up. "Everyone calls us Power-Up so why keep swimming against the tide?" said sales director Graham Lomax. "Basically it gives us more mileage out of the *Power-Up* brand name and eradicates any confusion."

Power-Up sells thousands of useful little PC programs which do anything from printing out labels to aiding the design of forms. For a catalogue call 0276 65272. ■

Four-pack out

A new games compilation is launched this week featuring some of the best games from lesser-known publishers.

Hyperaction from Impressions features Logotron's highly-acclaimed *Defender* game *StarRay*, *Hellbent* from Novagen, *Ringside*, a boxing game from German firm EAS, and Impressions' own *Raider*.

The pack costs £24.99 on the Amiga; the ST version features *Brickbusta* instead of *Raider*. ■

Second-hand season

Bargain hunters in the US can look forward to a bumper crop of second-hand goodies following the spectacular crash of junk bond company Drexel Burnham Lambert.

The company is to sell off $140 million worth of hardware and software. But most of the buyers will be in the financial market.

Amazingly, the firm wants to sell it all off as packages – hardware and software complete with human operator. Some 500 computer staff have to be relocated. ■

MORE HONG KONG PIRATES SCUPPERED

The authorities in Hong Kong appear to be winning a battle against software pirates.

Last week customs officials seized illegal software and manuals with a theoretical value of nearly £1 million. In various raids nine people have been arrested.

One was a 38-year-old man who had been running an international mail-order operation with customers in New Zealand and the US.

And police arrested seven more people working out of a shopping arcade infamous for its trade in illegal products of 'a varying nature'.

Late last year anti-piracy cops busted one of the colony's biggest piracy operations.

The man the police arrested was said to have been personally controlling nearly 70 per cent of Hong Kong's thriving software piracy business. ■

Computer files label people as criminals in error

DATA PROTECTION: KNOW YOUR RIGHTS

The Computer Data Registrar, Eric Howe, has launched a new leaflet designed to let you know your rights when it comes to computer data.

Howe says that despite the efforts of the Registry there are still many anomalies on official computer systems. Cases of people being labelled as criminals on computer records have been reported, as well as disturbing incidents of confused medical records which list perfectly healthy people as sufferering from various maladies.

"The growing number of cases with which we have been dealing show that, for instance, you can get wrongly labelled with a criminal record or be unfairly listed as a bad credit risk – the list goes on and on," said Howe, "It can result in serious consequences for the people concerned.

"One of the reasons why the Data Protection Act was introduced was to help resolve some of these problems, but there are still too many people who only have a vague idea of their rights, what we can do to help them and what they can do to help themselves. The new leaflet is designed to provide guidance on these questions."

The Registry now receives about 60 complaints every week – twice the number of a year ago. The registrar hopes that the leaflet will prompt more people to take action.

The leaflet is called *If There's a Mistake on a Computer About You*. If you want to know where you stand, get one free from: The Office of Data Protection Registrar, Springfield House, Water Lane, Wilmslow, Cheshire SK9 5AX or call 0625 535777. ■

Sumo like it hot

Aaaiiieee! It's time to get grappling and grunting on your computer. Martial arts are back.

MicroProse is to launch a four-pack of fighting titles incorporating sumo wrestling, kung fu, kendo and freestyle. Gamers will have to battle their way through various rounds until they reach Master status.

One interesting feature is the ability to decide which moves correlate to various joystick movements. You can pre-program up to four moves for each joystick movement. *Oriental Games* will be launched on all major formats in April. ■

• Lynx: enhanced versions

Lynx 2 coming

Atari is already working on enhanced models of its Lynx handheld games machines.

Blueprints for the new models have been drawn up, but the plans are at an early stage. The Lynx 2s won't be introduced for another two years although Atari promises they will be worth the wait. ■

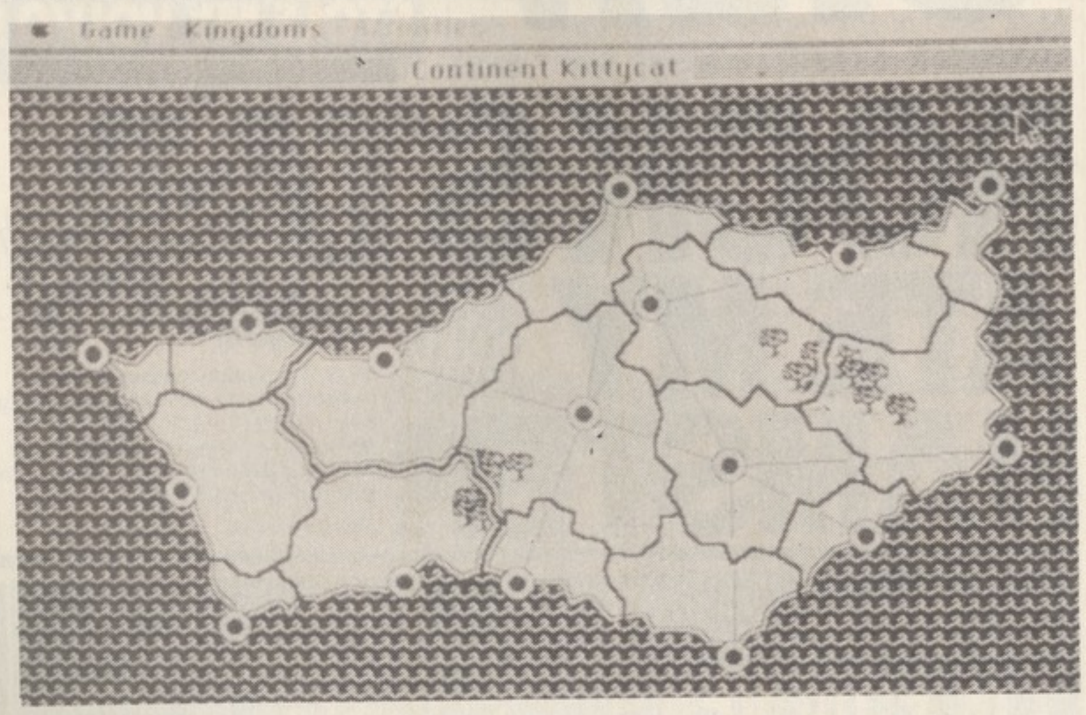
Euro Word

If you're one of those people who don't know their 'bonjours' from their 'auf wiedersehens' then maybe its time to invest in some foreign language dictionaries.

Luckily, word processing giant WordStar has just launched four such items for the PC. They are available in the four main European languages – French, German, Spanish and Italian and cost £49 each (or £99 for the lot).

The dictionaries can be used to check for embarrassing spelling errors and work with any version of *WordStar* itself. Call 01-643 8866. Ciao... ■

MORE GLOBAL DOMINATION



The author of the award-winning world global politics game *Balance of Power* has just finished the sequel – *Guns and Butter*.

Chris Crawford has come up with a more economics-based simulation for the follow-up game. Set on an imaginary continent, it features a small country with ambitions to global empire. You must first build up the economy of your country, then put it on a war footing, producing the guns of the title.

The game uses an easy-to-control user interface to enable you to make your decisions and forge alliances with neighbouring despots. Graphs showing production levels can be altered to control the factories, and armies are placed with the mouse.

The game features thousands of variables, and there are more than a billion different continents to conquer.

Combined with the game's three difficulty levels, there should be many hours of play in the scenario.

The game's publisher even claims it has some educational value, teaching the player the "implications of modern macroeconomic and geopolitical theories".

That aside, *Guns and Butter* will be distributed in this country by Mindscape International. Versions will be available for IBM PC and Apple Macintosh in March, priced at £29.99 and £34.99 respectively. No plans have yet been made for other computers. ■

Virus protection for troubled Mac

If you're fortunate enough to own an Apple Macintosh you will have noticed the amount of public domain and 'home made' software floating around.

One side effect of this is an unhealthy number of viruses on the loose for that machine. There are dozens of them, some of which simply slow the machine down, some with 'amusing' messages, and some which really do damage.

Microcom Software has just launched a virus detection and prevention package for the Mac called *Virex*. It's been put together to combat new strains of the nastier viruses currently sweeping across Europe from the US.

"The latest strains of virus have shocked a lot of people who claimed that their product would be able to detect any new virus without being updated," commented Microcom Software managing director Barry Marshall-Johnson. "We've been extremely aggressive about dealing with new viruses and we want to emphasis the importance of offering rapid updates to cope with any new or unconventional viruses that are certain to appear."

Virex costs £59. Call Microcom on 0483 740763. ■

Jerry Glenwright reviews the alternative book on hacking

HOW THE GOOD GUYS BEAT THE COMPUTER CRIMINALS

In the beginning there was the *Hacker's Handbook*, a controversial little tome detailing the decidedly shadowy underworld of computer hacking – breaking into and manipulating computers owned by the the military, government, educational establishments and the like. Thrilling stuff for those who like their computing raunchy.

Now it's the turn of the opposition with Clifford Stoll's *The Cuckoo's Egg*, a factual account of the electronic detective's adventures tracking hackers around the globe.

Stoll first came to prominence during February 1989 after he successfully located and prosecuted several West German hackers who had used a Berkeley research laboratory's Unix computer as a gateway into American military and government networks.

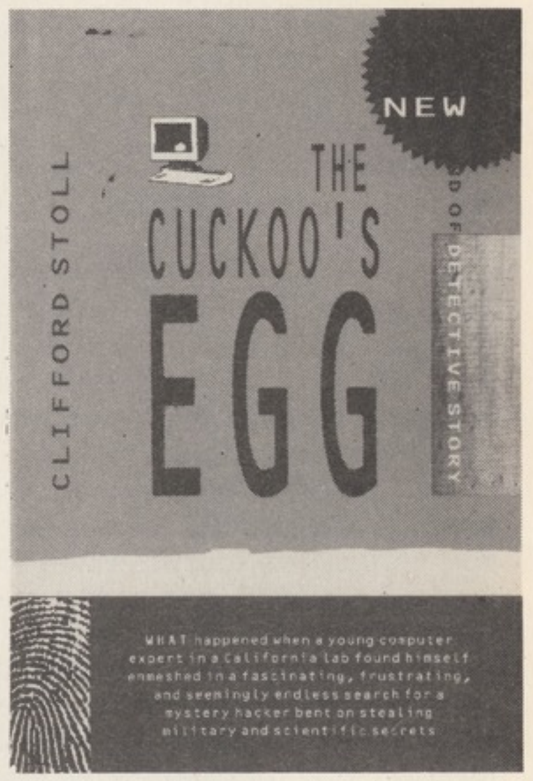
As system manager of the Berkeley machine, Stoll began to notice shortfalls in the on-line accounting. Suspecting undergraduate pranks, he arranged a series of traps in an attempt to locate those responsible. What he discovered however, was computer infiltration on a grand scale, coming not from his beloved Berkeley campus, but deep in West Germany, home of the infamous Chaos Computer Club hacking group.

Expect a deathly dreary account of electronic tampering and you will be more than a little surprised, for *The Cuckoo's Egg* is a thrilling chase across computers, networks and continents worthy of the master William Gibson himself. And like a good crime novel, the book will have you guessing as to just who's responsible until the very end.

But what sets this book apart from the ever-widening computer crime chasm on the bookshelves is the 'human' element involved. Stoll interweaves the hacker's escapades with his own amorous adventures in a shared house in downtown LA. Being dragged from bed (and his lover's arms) every time the hacker logs on and trips the electronic alarm, stepping naked and wet from the shower to rush to his Macintosh personal computer – colliding with a violin-playing housemate – and being deeply frustrated with the reluctance of crime fighting agencies such as the FBI and CIA to get involved, each merrily passing the buck to the other.

It's all here, good guys and bad guys, hackers and cyberpunks, thrills, spills, romance and computers. Lucid and competently written, *The Cuckoo's Egg* is an enjoyable read for all those even vaguely interested in high-tech.

The Cuckoo's Egg by Clifford Stoll, published by Bodley Head, is available priced £12.95 from all good High Street bookstores. ■



• Stoll's book: naff cover but a good read.

Low tech help from CRL

An environment that will allow non-technical people to write a variety of complex programs has been developed by the veteran software publisher CRL.

Called DUNE (Developer's Universal Non-programming Environment), it can be used to write programs with interactive facilities and high-quality graphics on floppies, hard-disks or interactive CDs when they become available.

DUNE is aimed at three main markets and computers: IBM compatible PCs, probably for business applications; Acorn Archimedes for education and Commodore Amiga for home and leisure. ■

Keyline on line

500,000 Keyline Shopping terminals will be in British homes by next year, according to the company which makes them.

Owners will be able to access a range of services from ordering supermarket goods to betting and banking provided by 18 well-known retailers. The brainchild of Chris Curry, ex-boss of Acorn, each small portable terminal will feature a built-in smart-card reader to hold password and automatic debiting data and will cost £50. Trial runs of the system will begin in the summer. ■

REVENGE OF THE HAMSTERS

THE Stun
COMPUTER ENTERTAINMENT SOFTWARE

Stun EXCLUSIVE
ALIENS STOLE MY VOLVO!
see page 5

ROCK STAR ATE MY HAMSTER

SECOND EDITION

By *Stun* reporter COLIN JONES

Stun EXCLUSIVE

Sexy Wimbledon masseuse Suzy Nokkers, 27, last night told how ageing sicko rockstar HAZZY HASBEEN, 73, devoured her hamster, Bobo at a wild showbiz party on Rockall. "I didn't – I'm a vegetarian!" said Hazzy.

Full story inside.

BUBBLES - I'M FOREVER BLOWING!

Monkey Bubbles' nights of baked bean bingeing!

We exclusively reveal today the REAL REASON why mega moneybags rock-star WACKY JACKO seals himself in an OXYGEN TENT!

– Full story on page 5

• Remember Rock Star Ate My Hamster, *the game which puts you in charge of a rock artist? Well, it's just been re-released by CodeMasters as a budget game for £2.99. In the game you get the chance to manage one of a number of popsters including Dross, Annie Smallpox, Bill Collins and Dorrissey.* ■

Computer tracks cheats

A new computer has been invented which could put an end to cheque book fraud.

The American machine can be taught to read handwriting and confirm whether or not a signature is genuine, an operation taking only four seconds.

Cheque book cheats would be caught out in seconds if the machine is taken on by retail organisations. It is claimed that the computer – invented by the Nynex Corporation – can read even virtually illegible handwriting and can cope with style changes. ■

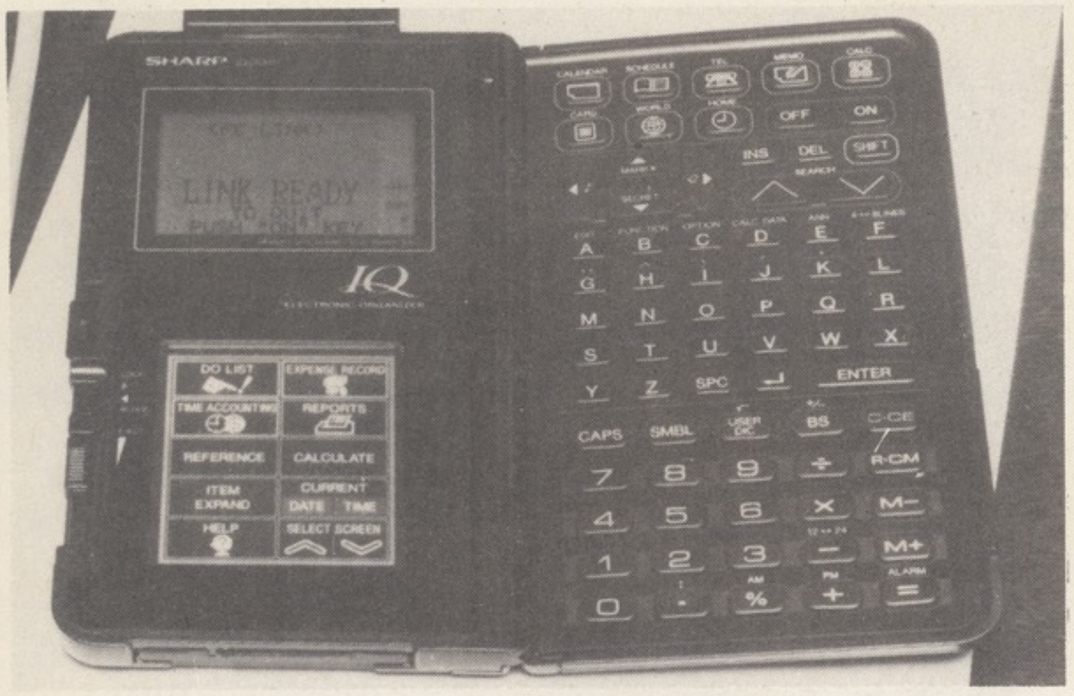
Bloc busts out

Four new specialist PC programs have been launched by Bloc.

Corporate Ladder allows users to create organisational charts, diagrams and trees based on products or families of products. You enter the text and the format of the chart and the program does the rest. It costs £69.

There's also *PrintRite*, an £89.95 print spooler for up to five printers.

DiskVision is a hard disk manager and archiving system costing £69.95,. while *PopDrop Plus* allows you to install desktop accessories on your PC without taking up too much memory. It costs £89.95. Call 0983 405600. ■



Sharp Organises a 64K computer for the wallet

Sharp has launched a new version of its wallet-sized electronic organiser – with twice the memory of the original.

The Sharp IQ-7200 has a 64K memory and measures just 9cm by 17cm. It weighs 250 grammes and comes with a built-in calendar, diary, world clock, telephone directory and memo pad offering 12 pages of electronically stored briefs, reports and letters.

Users can also load in a variety of IC cards including a thesaurus, an eight-language translator and a time/expense manager.

There's also an optional PC link which costs £99. The IQ-7200 costs £179 with the 12-month-old IQ-7000 retailing at £149. ■

• Left: The Sharp Organiser now has a higher IQ

Brother gets the Blues

Printer and PC manufacturer Brother has extended its sponsorship deal with soccer club Manchester City.

The deal is worth £1 million to the club – currently placed in the bottom half of the first division. Brother initially signed a three-year agreement at the start of the 1987/88 season. The new deal secures the relationship for a further three years.

One of the reasons for choosing City is Brother's proximity to Maine Road – its European headquarters are at Audenshaw, Manchester. Apart from computer kit, Brother also manufacturers fax machines, mechanical office equipment and white goods such as microwave ovens.

Other computer companies affiliated to the football league include Commodore (Chelsea) and NEC (Everton). Amstrad was also close to tying a deal with Spurs a few years ago. ■

Mad prices in Manchester

A new 'buyers show' is to be launched this month in Manchester – Computer Cash 'n' Carry '90 promises loads of bargains for those of us with a tight budget.

The EMAP Exhibitions event is to be staged at the Manchester's G-Mex from Thursday March 15 to Sunday March 18. It costs £4.50 to get in, or £10 for a family ticket. "A lot of exhibitors will be having special show offers," claim the organisers. Call 01-404 4844 for more information. ■

Jersey joins the smart set

For the first time anywhere in Britain, inhabitants of the exclusive island of Jersey will soon be able to pay for most of their purchases with a smart card.

Terminals will be situated throughout the island at retail outlets, petrol stations and leisure centres. The cards will also carry medical information about their carrier, enabling the local health service to quickly diagnose ailments. The Jersey MultiCards will be available in the next few months. ■

The first console games for under £10 are here

SEGA DROPS PRICES OF ITS CARTRIDGES

The price of a large range of Sega game cartridges has been slashed in a surprise move by the console's European distributor Virgin/Mastertronic.

As of March 15, six titles – *Enduro Racer, Ninja, Rescue Mission, Super Tennis, Teddy Boy,* and *Transbot* will cost £9.99. It's the first time Sega games have cost less than £10.

Six more games have been reduced to £12.99. They are *Action Fighter, Aztec Adventure, Fantasy Zone, Global Defence, Secret Command* and *World Grand Prix.*

Console cartridges have traditionally cost anything from £20 to £30 each. Virgin says there are plenty of hardware owners who want to increase their library of games without having to spend £22.50 on each product.

The firm claims that there are now at least 200,000 Sega owners in the UK. "One of the only consumer negatives about console software has been its high price – we have therefore been working with Sega for some time in order to try to create a low-priced software range and we're delighted that we have been able to achieve this," commented brand manager Philip Ley late last week.

Almost immediately, Nintendo distributor Serif hit back. In a public statement the firm's deputy managing director Rae Potter said: "I think we're seeing a competitor on the run. Sega are either seeing a lower than expected demand for their products or are worried about the rapid progress Nintendo is making – probably both."

He also taunted Sega about its poor performance in the US compared to Nintendo. Nevertheless, in the UK the Sega is way ahead of the Nintendo in terms of sales. ■

Sea the latest accelerators

What has windsurfing got to do with PC enhancer boards? Hypertech has the answer.

The firm will be launching a series of turbocharging boards at the *Which Computer?* Show in April and will be giving a surfboard away in a special competition. The surfboard may not be a lot of use to most of us, but PC owners might want to get stuck in to the add-on boards.

The low end Hyperace II is pitched as "the ideal upgrade product for PC users". It slots into a number of 8086 and 8088 PCs – including Amstrad models – and gives you extra 286 speed. Retail price is £299. Call 0627 63936. ■

CompuAdd adds 286

CompuAdd has launched a new small footprint 286 PC.

The CompuAdd 220 comes with 1Mb of RAM expandable to 4Mb. It comes with a 40Mb hard disk with 80 and 110Mb options. The machine runs at 20MHz, has five expansion slots and two serial ports.

It costs £1,389 and comes with free 12-month on-site maintenance cover. The 220 replaces a larger model which used to cost £350 more.

Meanwhile, CompuAdd is to start selling 'Network Starter Kits' each of which will feature Novell network software, Ethernet hardware and a choice of 286 or 386-based file server.

The Workgroup Starter Kit will link up four machines, while the Department Starter Kit can manage eight.

Call CompuAdd on 0272 254789 for more details. ■

COMMENT

With the latest round of bundling for the ST, is Atari deliberately discouraging prospective buyers from taking the STE as a 'bare' package?

Journalists' diaries have carried the pencilled comment 'New package for ST?' against the end of February or start of March for many months now, so it comes as no surprise to learn that Atari does indeed have plans for re-bundling the machine.

What was not so easily foreseen – though perhaps in retrospect it should have been – was precisely the type of twin-pronged initiative that the company would devise for the ST's assault on the market this year.

It was assumed in some quarters that the new STE would immediately become the *de facto* ST standard, and that the STFM would simply become Last Year's Model almost overnight. Stocks of the old machine would be run down during the spring (while the myriad software compatibility glitches were ironed out) and the STE would emerge like some sort of electronic butterfly for the summer.

NEATLY TAILORED

Of course, any such neatly tailored plan would, in any case, have been superseded the moment it became necessary to ship in advance STE units when STFM stocks proved inadequate to satisfy the Christmas market. A 'clean' launch for the STE was impossible.

This aside, Atari's decision to persist with the STFM as a 'first-time buyer's machine' is an interesting one. At £299, the Discovery Pack does not change the size of cheque which must be signed to take possession of an entry-level ST, but the mysterious package of bonus software which will be bundled with the STFM means that, in real terms, the price of the machine has been reduced.

If the value of added extras is in any way comparable with that involved in the discontinuing Powerpack, the effective price-cut on the STFM is as much as £100 – good news for buyers who have hung on for post-Christmas bargains, and presumably providing a stock-flow boost to Atari over the traditionally lean summer months.

The way that Atari is handling the STE adds to one's impression that the company is at least passively discouraging the 'bare machine' concept.

At £399 the bare STE compares unfavourably with the Powerpack that, price-wise, it directly replaces. The current package (theoretically if not actually containing only STFMs) has bundled software with a notional value of around £500 – an astonishing figure to place as the premium on the newer machine.

SERIOUS

The £499 1040STE bundle, on the other hand, will come with a quoted £400 worth of 'serious' software. Interestingly, both the price of the package and the stated value of software precisely match a 'Professional Pack' already available with the STFM. So for users of such software, the STE comes at exactly the same price as the machine it replaces.

Perhaps it is to read too much into this to regard it as a thoroughly calculated and concerted Atari push to represent the ST as far more than a games machine, but this will certainly be the net result of applying the proposed price bands

But then the workings of Atari's corporate mind are never easy to fathom. Does the new set of bundles imply that the early STE release was not a fiasco at all, but a way of supplying 'cut-price' units which were paid for by their owners in trouble-shooting?

The idea is attractive, but in the end probably no more than fanciful. In all events, the proof of the bundles is clearly to be found in their units sold. ■

FROM The ARCHIVE

ONE YEAR AGO

It was the week of the *Which Computer?* Show at the NEC, Birmingham, and there was an absolute orgy of unveiling, revealing releasing and announcing ...

Commodore finally produced a hard drive for the Amiga 500. Price predictions for the A590 hovered around the £500 mark (it came out at £445), but it didn't actually become available until September.

Acorn trotted out its UNIX workstation with 'a fistful of baffling applications and software'. However, since it was priced at £3,500, not too many of us ever had to grapple with it in a serious way.

Pocket PCs: The battle begins

As expected Atari launched its Folio Pocket PC at the Which Computer? Show heralding in a battle to win the hearts and cash of a potentially huge user base.

Whilst Atari is the first to come up with such a machine another company in the US is secretly planning to launch its own handheld MS/DOS compute competition is likely to come from Atari's own bac Sunnyvale, California where Poquet Corpor developing its own pocket sized PC

Poquet has only been in existence for 12 mo the launch of its PC is expected later this year this week opened up offices in the UK. No known about its machine although it is unde prototypes have been developed.

both Poquet and the Pocket PCs d talks last year to produce t

• DIP's boss David Frodsham unveils the P Pocket PC

Atari brandished its much-hyped Pocket PC Portfolio, in the hopes that no one would notice that the Mega 1 ST hadn't quite arrived.

The Transputer Workstation, however, buzzed away impressively and fascinated the crowds.

For once Amstrad didn't have a lot to say, except that it was confident at least as far as the success of the PC2000 was concerned.

Elsewhere – London's Baker Street to be exact – Level Nine was winning what was claimed to be Britain's most prestigious 'adventuring' award.

***Ingrid's Back* was voted Best Adventure of 1988, despite receiving only lukewarm reviews when first released the previous autumn.**

The trade press was 'rocked' (that is not to say, surprised) by the news that Telecomsoft was up for sale after a management buy-out effort came up a little bit short.

Speculation at the time concentrated on the giants Mirror Group, Mediagenic and NEC.

The company was eventually purchased by MicroProse.

Gremlin was forced to call back its big name ST title *Federation of Free Traders* because of... gremlins. You can probably guess how much fun the headline writers had.

The game had taken two years to develop and it had been seemingly endlessly dogged by disaster.

The final problem was that the game could not be saved onto another disk – a major catastrophe for serious game players.

"We had people play-testing it for a week non-stop but some bugs will always get through," said a spokesman for the company, bravely.

"We made a few mistakes on the manual as well," he also said.

TWO YEARS AGO

The DRAM chip shortage made itself felt by pushing up prices on the computer front – predicted as a 12.5 per cent increase for Amstrad and 33 per cent for Atari.

Other manufacturers were expected to follow suit – although Commodore ruled out any increases 'for the foreseeable future'.

Commodore stuck to its guns and six weeks later even went so far as to cut the price of the PC1 by £100 to £399 – not a bad idea since the machine hadn't been incredredibly popular up to that point. Indeed, Amstrad's solution had been to cut dealer margins...

Sources: New Computer Express, Computer Weekly, Computer Trade Weekly, MicroScope, PC Dealer, Computer Talk, Datalink.

EXPRESS

EDITOR • Martyn Lester
FEATURES EDITOR • Andy Storer
NEWS EDITOR • Colin Campbell

CONTRIBUTORS
Rob Ainsley • Jerry Glenwright • Maff Evans
Steve Carey • Simon Williams • Robin Alway
Andrew Brown • Keith Neal • Jason Holborn •
Bertram Carrot • Rod Lawton • John Torofex •
Pete Gerrard • Mark Higham • Ian Pemble

ART EDITOR • Julia O'Shea
PRODUCTION EDITOR • Stuart Anderton
DEPUTY PRODUCTION EDITOR • Ben Feinbaum

ADVERTISEMENT MANAGER • Mark Salmon
DEPUTY AD MANAGER • Adrian Taylor
AD EXECUTIVES • Simon Moss • Helen Kirkhope
ADMIN CO-ORDINATOR • James Leach
AD PRODUCTION • Frances Wasem
AD TYPESETTING • Terry Turner

ASSISTANT PUBLISHER • Jane Nolan
PUBLISHER • Greg Ingham

© Future Publishing Ltd • 30 Monmouth St, Bath, BA1 2AP • Tel: 0225 442244 • Fax: 0225 446019
Subscriptions: The Old Barn, Somerton, Somerset (0458) 74011
• Printed by Redwood Press, Melksham, Wilts • Distributed by Comag, West Drayton, Middx

ATARI ST and AMIGA

Sixteen Bit Superdeals from the Sixteen Bit Specialists!

CUSTOMERS PLEASE NOTE! When comparing prices remember ours include fast delivery by courier.

NEW!!

520STE Power Pack
£359.00
Inc. VAT and Next Day Delivery

NEW STE

Power Pack includes:
★ 520STE 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
★ 4096 Colour Palette
★ 8 Channel digital stereo sound
★ 4 Joystick Ports
★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE
★ First BASIC and First Music Utility Software
★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95
★ All leads, manuals PLUS MOUSE and free mains plug!

REMEMBER! Many ST's do not come with BASIC - ours come with ST BASIC REV D by Metacomco

520STE Explorer Pack
£279.00

NEW STE

★ Explorer Pack includes 520STE 512K Keyboard with built-in 1 Megabyte Disk Drive and TV Modulator.
★ 1 FREE Game, ST Tutorial and METACOMCO Basic worth £25.00.
★ All leads, Manuals PLUS MOUSE and FREE Mains Plug!
★ Free mouse mat worth £4.95.

1040STE BUSINESS PACK
£479.00

★ Includes the new 1 megabye 1040STE keyboard plus FIRST WORD wordprocessing software, SUPERBASE PERSONAL Database Software and NEOCHROME graphics package. Also includes Metacomco BASIC, Mouse Pad, all Leads, Manuals and Mouse.
★ 1040STE keyboard without software **£439.00**

MEGA 1 BUSINESS Pack
£529.00

Features:
★ Separate Keyboard and System Unit
★ Inc. all software supplied with 1040 STE Business Pack
★ Blitter chip installed for faster graphics

Inc SM124 Mono Monitor.....£628.00

ACCESSORIES

Quickshot II Turbo Joystick.....£9.95	Branded Memorex 3.5" DSDD Disks
Competition Pro 5000 Joystick £13.95	Box of 10 .....£13.95
Competition Pro with Autofire £14.95	Memorex Disk Box
Konix Speedking Joystick.....£11.95	For 40 3.5" Disks £8.95
Red Mouse Mat with Amiga logo £5.95	Amiga 1/2 Meg Expansion £119.95
Plain blue Mouse Mat £4.95	Control Centre Atari or Amiga .£44.95

Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95

PRINTERS

Star LC24-10 24Pin incl. lead ST/Amiga.....£249.00
Star LC10 including interface lead for ST/Amiga.....£169.00
Star LC10 colour including interface lead for ST/Amiga.....£219.00
Citizen 120D including interface lead for ST/Amiga £159.00
Citizen 120D including interface lead £139.00

SEIKOSHA 80 COLUMN PRINTERS - AMAZING PRICES

Seikosha 9 pin NLQ including interface lead for ST/Amiga.....£139.00
Seikosha 24 pin LQ including interface lead for ST/Amiga £239.00

AMIGA A500 BAT GAMES PACK
£399.00
Inc. VAT and Next Day Delivery

NEW!

BAT Games Pack includes:
★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
★ DELUXE PAINT II GRAPHICS PACKAGE.
★ PHOTON PAINT II graphics package with animation worth £70.00.
★ FREE, only-just-released BATMAN - THE MOVIE games software.
★ NEW ZEALAND STORY arcade games software.
★ F16-INTERCEPTOR - amazing 3D flight simulator software.
★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
★ FREE JOYSTICK, MOUSE MAT AND 10 BLANK DISKS.
★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
★ All leads, manuals PLUS MOUSE and mains plug!

AMIGA 1 MEG BAT GAME PACK
£529.00

NEW!

1 Meg Bat Games Pack includes:
★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
★ Everything listed for the A500 Bat Game Pack
★ DRAGON'S LAIR 1 MEG MEGAGAME!

AMIGA A500 CLASS OF THE 1990'S BUSINESS + EDUCATIONAL PACK
£549.00

FEATURES:
★ Amiga A500 + TV Modulator
★ Midi Interface + Software
★ Kind Words II word processor
★ Page Setter DTP
★ Super Base Personal Database
★ Maxiplan 500 Spreadsheet
★ Amiga Logo, BBC Emulator, Deluxe Paint II
★ Mouse mat, 10 blank disks and disk wallet

EXTERNAL DISK DRIVES

Atari SF314 1 Megabyte.....£139.00
Amiga A1010 1 Megabyte £109.00
Cumana 1 Megabyte Atari or Amiga £89.95
NEC 1 Megabyte Atari or Amiga £79.95
Atari Megafile 30 Hard Disk.....£439.00
New! Commodore A590 20 meg hard disk.....£369.00
A590 Hard Disk + Memory Upgrade installed .....Phone

MONITORS

Commodore Amiga A1084 stereo Monitor inc lead £269.00
Atari SC1224 Colour Monitor inc lead.....£259.00
Atari SM124 Mono Monitor including lead.....£119.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga £259.00

CREDIT CARD ORDERLINE ☎ 0908 378008 (Mon – Sat 9am – 6pm)

To order either call the orderline above with your Credit Card details OR make a cheque or P.O. payable to: Digicom Computer Services and send it with your order to the address below. Callers are also most welcome at the address below.

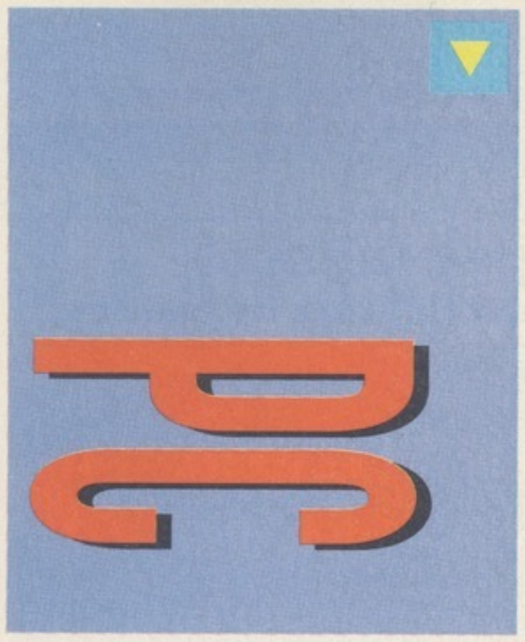
INSTANT CREDIT NOW AVAILABLE

DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES, MK2 2AZ.

All prices include VAT and delivery by courier
** Written details on request APR 34.5% Variable.*

Access VISA



I B MPRESSED

Us yokels in the West Country be easily overawed with the technical wizardry of them laddies and ladies from the New World. A recent circular from the world's favourite blue-striped computer company set out to check on its mailing list for journos. 'Which products did I want info on?', it asked – I ticked a few headings.

Within a week I was inundated with press releases on just about everything imaginable from IBM. So, in case you find that corporate giant as interesting as I do, here's what they contained.

IBM has just released a personal information manager called *Current*. It's the kind of product which can benefit from the multi-tasking of Windows, the environment under which it runs. Though not cheap, at £372.60, the press release is keen to point out that the user interface is in English – that'll be handy.

The other six releases turned out to be about a set of reduced instruction set computer (RISC) workstations, which start at around £10,000 and head on upwards.

The documents start with 'IBM Announces High-Performance RISC Workstation Family'. A reasonable approach, given the subject matter and the target audience – in all the document runs to 11 pages.

The next release, 'RISC System/6000 Powerstations and Powerservers Set the Pace for Price/Performance', followed up on the first announcement with details of the actual machines – 10 pages.

I started to flag at 'IBMs Innovative Technology and Design Produces Advanced Workstations and Software' – nine pages – which develops the architecture of the new machines.

The next two – 11 pages between them – delve into a new version of AIX, IBM's Unix, and the graphical user interface designed to hide it from the user. Severely sleepy, I only just managed to wade through 'IBM Expands SAA/AIX Intercompatability Capabilities' – which ran to 11 pages.

Does the word 'overkill' mean nothing to the IBM PR department? It is an important announcement, but 52 pages banging onto the breakfast table with your All Bran makes you want to run faster than the cereal does.

TURNING THE TABLES

As if to prove that I do actually do some serious work with the DTP kit I go on about in this column, last week I laid up the trade price list for Salcombe Dairy ice cream.

This is by far the most delicious ice cream on the entire planet, with the possible exception of Dayville's Butter Pecan. We had one of the ice cream Christmas cakes this year and it was amazing, though we couldn't blaze it in brandy – but I digress.

The original idea was to take the existing *Windows Write* files and just change the figures from last year. As it turned out, the files supplied were rather older than 1989 and it was necessary to lay out the whole list.

Turning to *Timeworks DTP* as the program I know best, this relaying proved to be a fairly painless job, once I remembered how to use the tab facility.

Tabs in *Timeworks* come into force if you set the justification to 'table' mode. You then have 10 tabs available, which you can set to the nearest .01 inch.

Each tab can be left, right, centred or decimal. This system worked well using decimal tabs, except for a column which included £1.60 and 50p.

The 50p wasn't correctly aligned and had to be entered .50p for the decimal tab to take effect. There seems to be no way round this – I just hope none of Salcombe Dairy's customers try and buy tubs of ice cream at half a penny a go! Indeed, as they say, the true proof is in the tasting, and if any of you out there are able to taste ha'p'orth of ice cream, do let me know.

NERD AFTERTHOUGHT

While trying to convince a poet friend of mine that, yes, *Newman's Electronic Rhyming Dictionary* really does exist, said friend remarked upon a coincidence that thankfully did not come to pass.

My friend, like myself, is interested in the acronyms that magically appear around us. Further, she said that it was lucky for the people who bring us *NERD* that the name wasn't Thompson's Universal Rhyming Dictionary instead.

I have to admit she has a point.

KWIK, COPY THIS DISK

The Ctrl Alt Deli, distributors of many new and innovative products, seems to have been quiet for a while now. However, Nigel Grant, its MD, has just dropped me a copy of the company's own fast disk copier, *KwikCopy*.

The program replaces DOS's `DISKCOPY` command and is intelligent enough to copy only the tracks with data on them and to make multiple copies from a single read of the source disk.

To achieve this last feat, the program uses a temporary file on a hard disk to act as a spooler. *KwikCopy* is considerably quicker than `DISKCOPY`, with the increase in speed more marked for higher-capacity disks. For instance, to copy five, 1.2Mb disks under DOS on an 8MHz AT takes over 11 minutes and involves 25 disk swaps. The same operation under *KwikCopy* takes around three minutes with only five swaps.

Each copy is verified twice and the whole program is menu driven. It even checks you've got the source and destination disks in the right drives to avoid writing to the source by mistake. *KwikCopy* costs £56.35, and *KwikCopy Plus*, with extra optimisation and the ability to use EMS memory as a spooler, comes in at £67.85.

Ctrl Alt Deli is on 0908 662759. Oh, and Nigel, did *What Personal Computer* really say 'For simple, hassle free disk copy *KwikCopy* ain't all bad'? Shouldn't there be an 'at' in there, somewhere?

A BIG BUILD-UP

It's been as hard to tie down a copy of *The Builder* – a batch file processing package I've been very keen to try – as hard, in fact as it usually is to book a call from a good carpenter.

Software Paradise, in its usual helpful way, is still indisposed, as the program hasn't been released in the US. But a recent letter from Nigel Nock of SP assured me that he had actually held a copy in his hand, and that the first of the software packages had to go to customers who had pre-ordered.

Nevertheless, said Nige, you can tell it really exists as I've enclosed a photocopy of the box. Well, it may exist, but I'm not counting my chickens, particularly as there was no photocopy in the envelope!

Simon Williams

A LITTLE AMSTRAD CREDIT

Alan Sugar is renowned for disliking the Press, and with some justification. There have been some mean rumours circulated about the company which bears his name, and any rumour that can knock millions of pounds off your personal fortune, even if only notional, must hurt.

So, for what it's worth, I'm happy that he seems to have pulled the company round and set it on an even keel. I believe it must have been hard to sell some of the stockpile of 2000 series PCs, and even harder to push the Sinclair 200 – a fact which even Amstrad seems to have conceded.

What Malcolm Miller said of 'a new product every month from April' sounds exciting, and should encourage the share price. And the idea of doing something positive with the CPC range is long overdue.

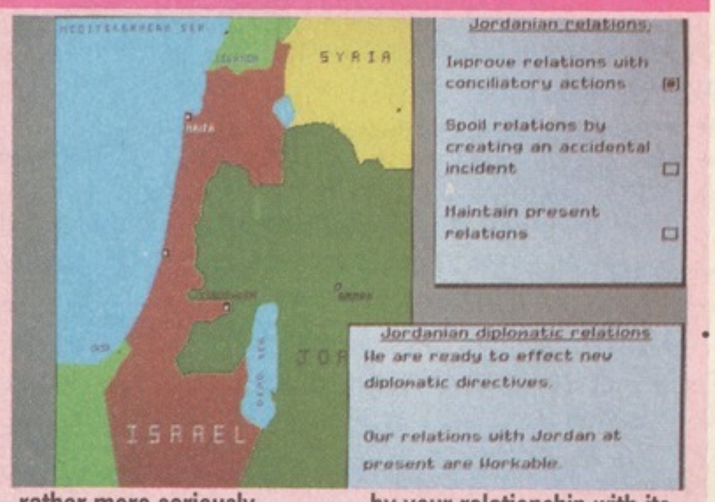
Overall, things look pretty bright for the company, though I agree with the Editor that its fax machine looks somewwhat overpriced. At any rate, we shall certainly see what we shall see!

• The 2000 series – at first hard to sell.

PC GAME of the WEEK

CONFLICT

Virgin Mastertronic • £4.99



What is the worst job in the world? If the latest title on Virgin Mastertronic's budget 16 Blitz label is anything to go by, being Prime Minister of Israel is a hot contender.

***Conflict* is a political simulation set in the Middle East of 1997. You are surrounded by a powerful and ambivalent Egypt, a Syria heavily funded by the Russians, an unstable Lebanon, a neutral Jordan, a chaotic Libya and a war waiting to happen between Iran and Iraq.**

Your long term aim is the collapse of four neighbouring governments. But your short term aim is survival, at least for the six months or so it takes you to develop and to build a nuclear weapon, after which people seem to take you rather more seriously.

Each month you get the opportunity to influence your relationship with other countries by entering into trade negotiations, causing diplomatic incidents, supporting insurgent groups or other such actions.

You can also buy arms from various Western powers (provided you have behaved in a suitably civilised fashion), deploy your forces as necessary and even enter into armed combat. At the end of each move your fate is signalled by the newspaper headlines, and hopefully you remain in power for another month.

Your relationship with each country is influenced by your relationship with its friends and enemies in a complex fashion that makes survival no easy matter. Despite its futuristic setting, the simulation closely follows the situation in the Middle East around 1979, and appears to react fairly sensibly to developing situations without obvious political bias.

***Conflict* does take a fairly cynical view of Israel's situation and is only a game, but it is accurate enough to set you thinking. (*Thinking? Just reading the review gives me the heeby-jeebies – Ed*). And for under a fiver this game represents exceptional value.**

Matt Nicholson

QUALITY SUPPORT SERVICE

Technology Centre

DOT MATRIX PRINTERS

9 PIN NARROW CARRIAGE

		CPS	PRICE £
STAR	LC-10	144/36	125
STAR	LC-10 colour	144/36	166
STAR	LC-10 colour comm 64	144/36	166
CITIZEN	120D	120/25	108
CITIZEN	120D comm 64	120/25	108
CITIZEN	180E	150/30	118
PANASONIC	KXP 1081	144/28	122
PANASONIC	KXP 1180	192/36	139
MAN. TALLY	MT 81	130/26	107
OLIVETTI	DM 100SPR	200/30	119*
OLIVETTI	DM 105SPR colour	200/30	159*
EPSON	LX 400	180/30	135
EPSON	FX 850	264/54	354
HYUNDAI	HDP 910	180/34	134*

HYUNDAI HDP910
£127 WITH 1 YEAR ON-SITE WARRANTY

9 PIN WIDE CARRIAGE

STAR	LC-15	180/45	255
PANASONIC	KXP 1592	216/45	255
HYUNDAI	HDP 920	180/34	214*

HYUNDAI HDP920
£199 WITH 1 YEAR ON-SITE WARRANTY

24 PIN NARROW CARRIAGE

STAR	LC24-10	170/57	195
CITIZEN	SWIFT 24	160/53	239
PANASONIC	KXP 1124	192/63	219
EPSON	LQ 860 colour	290/88	549

24 PIN WIDE CARRIAGE

STAR	LC24-15	200/67	325
STAR	XB24-15	240/80	510*
EPSON	LQ 1050	290/88	549

* ALL DOT MATRIX PRINTERS MARKED WITH A N * INCLUDE A 1 YEAR ON-SITE MAINTENANCE CONTRACT.

A 1 YEAR ON-SITE MAINTENANCE CONTRACT IS ALSO AVAILABLE ON ALL OTHER DOT MATRIX PRINTERS – ONLY £16.

A FULL RANGE OF SHEET FEEDERS, TRACTORS, ACCESSORIES & CONSUMABLES ARE ALSO AVAILABLE FROM STOCK – CALL FOR DETAILS.

WARRANTY

ALL GOODS CARRY MANUFACTURERS WARRANTIES.
ON-SITE WARRANTY AVAILABLE ON ALL DOT MATRIX PRINTERS AND P.C.'S – CALL FOR DETAILS.
TECHNICAL SUPPORT AVAILABLE.
E.& O.E.
Goods not offered on trial basis.
Goods are offered for sale subject to our standard terms and conditions of sale – available on request.
WE STOCK MANY MORE PRODUCTS – CALL FOR DETAILS.
LARGE STOCKS OF FLOPPY DISKS AND RIBBONS CARRIED.

TERMS

ALL PRICES EXCLUDE VAT.
PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.
CALL TO CONFIRM BEFORE ORDERING.
STRICTLY CASH WITH ORDER. ACCESS & VISA WELCOME.
POSTAL ORDERS, CHEQUES AND BANKERS DRAFTS ACCEPTED.
OFFICIAL ORDERS FROM EDUCATIONAL & GOVERNMENT ESTABLISHMENTS, CORPORATES & PLC'S WELCOME.

DELIVERY

ALL GOODS NORMALLY DESPATCHED WITHIN 24 HOURS FROM RECEIPT OF CLEARED PAYMENT – subject to stock availability.

P.C.'S AND LASERS	£15.00	NEXT DAY DELIVERY
OTHER LARGE ITEMS	£10.00	NEXT DAY DELIVERY
SMALL ITEMS	£5.00	4 DAY DELIVERY

VISA Access

LASER & INK JET PRINTERS

			PRICE £
STAR	LASER 8	8PPM	1195*
STAR	LASER 8	DUAL BIN	1649*
H. PACKARD	LASERJET II	8PPM	1299*
CANON	LBP8-III	8PPM	1379
CANON	LBP8-IIIT	DUAL BIN	1699
CANON	LBP8-IIIR	DUPLEX DUAL BIN	1899
OLIVETTI	PG 306	6PPM	899*
OLIVETTI	PG 208	8PPM	1199*
MAN. TALLY	MT-905	6PPM	879*
MAN. TALLY	MT-910	10PPM DUAL BIN	2054*
PANASONIC	KXP 4450	11PPM	1269*
EPSON	GQ 5000	6PPM	1059*
CANON	BJ-130	INK JET	535
MAN. TALLY	MT-91	INK JET	541
OLIVETTI	TH-760	THERMAL	525*

(equivalent to IBM QUIETWRITER)

OLIVETTI TH-760 THERMAL PRINTER
(equivalent to IBM QUIETWRITER)
£525 WITH 1 YEAR ON-SITE WARRANTY

* ONE YEAR ON-SITE MAINTENANCE IS INCLUDED IN THE PRICE OF ALL THE ABOVE PRINTERS MARKED WITH A N *.

A FULL RANGE OF TONERS, FONTS, MEMORY CARTRIDGES, INK CARTRIDGES AND OTHER ACCESSORIES ARE STOCKED.
PLEASE CALL FOR FURTHER DETAILS.

PLOTTERS & SCANNERS

HITACHI	681	A4/A3	PLOTTER	520*
HITACHI	673	A4/A3	PLOTTER	686*
H. PACKARD	7440	A4	PLOTTER	619*
H. PACKARD	7475A	A4/A3	PLOTTER	899*
CANON	1X-12F		SCANNER	659
CANON	1X-31F		SCANNER INTERFACE	99
CANON	O.C.R. SOFTWARE			308
NISCAN	HANDSCANNER			139
NISCAN	O.C.R. SOFTWARE			189

SHARP
5541 PORTABLE 286
£2349

* ONE YEAR ON-SITE MAINTENANCE IS INCLUDED IN THE PRICE OF ALL PLOTTERS.

CABLES AND CONNECTIONS

PRINTER CABLE	1 METRE	8
PRINTER CABLE	3 METRE	9
MODEM CABLE	1 METRE	10
T SWITCH	2 WAY SERIAL	18
T SWITCH	2 WAY PARALLEL	18
T SWITCH	2 WAY SERIAL CROSSOVER	25
T SWITCH	2 WAY PARALLEL CROSSOVER	25
BUFFER	64K IN-LINE	79

THIS IS JUST A SMALL SELECTION OF OUR RANGE OF CABLES, SWITCHES, BUFFERS ETC.
PLEASE CALL FOR FURTHER DETAILS.

PORTABLE P.C.'S

AMSTRAD	PPC 512s	SD	349
AMSTRAD	PPC 640s	SD	439
SHARP	4602	DD	839
SHARP	4641	HD40	1439
SHARP	5541	HD40	2349
SAMSUNG	S5200 286	HD32	1707

COMPUTERS

AMSTRAD (includes monitor)

		MONO £	COLOUR £	EGA £
PC 1512	SD	368	442	–
PC 1512	DD	442	517	–
PC 1640	SD	463	541	623
PC 1640	DD	518	598	683
PC 1640	HD30	682	767	857

COMMODORE STARTER PACK (includes monitor)

ALL MODELS INCLUDE 1 YEAR ON-SITE MAINTENANCE

8088; 4.77/7.16/9.54mhz; 640K ram; 3 slots; enhanced keyboard. Includes: serial/parallel ports; clock; 1 or 2 360K drives; hard disk controller; MS-DOS 3.21, GW basic & manuals.

		MONO £	CGA £	EGA £
PC 10	SD	495	629	739
PC 10	DD	559	699	799
PC 20	HD20	679	799	929

(As PC 10 SD but includes hard disk drive)

SAMSUNG (monitor not included)

ALL MODELS INCLUDE 1 YEAR ON-SITE MAINTENANCE

80286; 8/12mhz; 1mb ram (exp. to 5mb); 5 slots; enhanced keyboard. Includes: serial/parallel ports; clock; 1 x 1.2mb & 1 x 1.44mb drives; hard disk controller; MS-DOS 3.3, GW basic & manuals.

			VGA £
SPC 6512/1	DD		1029
SPC 6512/2	DD	HD20	1306

HYUNDAI (monitor not included)

8088; 4.77/10mhz; 640K ram; 5 slots; enhanced keyboard. Includes: serial/parallel ports; clock ; 1 or 2 360K drives; MS-DOS 3.3, GW BASIC & manuals.

		MONO £	EGA £
SUPER 16TE	SD	399*	452
SUPER 16TE	HD30	589	658

* SPECIAL INTRODUCTORY OFFER ON SUPER 16TE SD MONO ONLY . . . INCLUDES 12" MONO MONITOR £378

HYUNDAI PC XT
WITH MONO MONITOR
£399

80286; 8/12mhz; 640K ram; 6 slots; enhanced keyboard. Includes: serial/parallel ports; clock; 1 or 2 1.44mb drives; MS-DOS 3.3, GW BASIC & manuals.

		EGA £	VGA £
286x	SD	744	769
286x	HD30	980	1091

AKHTER (monitor not included)

8088; 4.77/7.15/9.54mhz; 640K ram; 1 slot; 84 key compact keyboard. Includes: serial/parallel ports; clock; 1 or 2 720K drives; MS-DOS 4.1, GW BASIC & manuals.

MINI-PC		MONO £	VGA £
MINI-PC	SD	441	554
MINI-PC	HD20	479	593

80286; 8/12mhz; 1mb ram (exp. to 8mb); 7 slots; enhanced keyboard. Includes: 2 serial/2 parallel ports; clock; 1 x 1.2mb drives; hard disk controller; MOUSE, WINDOWS, MS-DOS 4.01, GW BASIC & manuals.

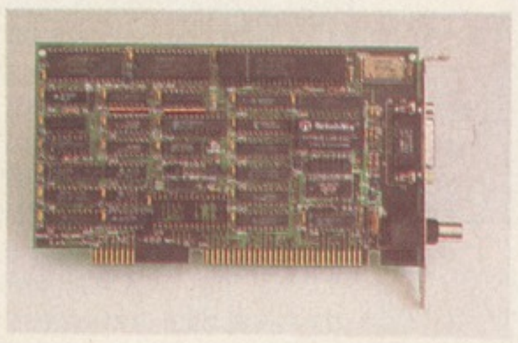
		MONO £	VGA £
AT 286-12	SD	779	876
AT 286-12	HD40	1071	1168

THIS IS ONLY A SMALL SELECTION OF THE P.C.'S THAT WE STOCK. CALL FOR FURTHER DETAILS.

MONITORS & CARDS

Mono monitors are available with green, amber or paper white displays – please state preference when ordering.

				PRICE £
MONO	HYUNDAI	HMM 1200	12"	65
MONO	HYUNDAI	HMM 1201 FST	12"	70
MONO	HYUNDAI	HMM 1401	14"	92
MONO	PHILIPS	BM 7513	12"	73
MONO	PHILIPS	BM 7913 FST	12"	80
MONO	PHILIPS	BM 7713 FST	14"	96
MONO	SAMSUNG	MA 2671/3/5 FST	12"	81
MONO	SAMSUNG	MA 4671/3/5 FST	14"	88
MONO	AKHTER	MONO 12	12"	65
MONO	AKHTER	MONO 14 FST	14"	79
MONO VGA	PHILIPS	BM 7749 FST	12" P/WHITE	107
MONO VGA	AKHTER	VGA 14M FST	14" P/WHITE	99
MONO VGA	SAMSUNG	ML 2611	12" P/WHITE	81
MONO VGA	SAMSUNG	ML 4571	14" P/WHITE	95
MONO A4	SAMSUNG	MP 5671 (inc card & drivers)		634
CGA	PHILIPS	CM 8833	14"	209
EGA	HYUNDAI	HCM 1420	14"	256
EGA	PHILIPS	CM 9073	14"	289
EGA	SAMSUNG	CM 4551	14"	281
VGA	HYUNDAI	HDM 401 FST	14"	253
VGA	PHILIPS	3CM 9809	14"	372
VGA	SAMSUNG	CJ 4581	14"	281
VGA	AKHTER	VGA 14	14"	273
MULTISYNC	SAMSUNG	CT 4581	14"	340
MULTISYNC	AKHTER	ECM 9600	14"	360
	MDA/CGA CARD with PRINTER PORT			45
	MDA/CGA/EGA CARD			99
	VGA CARD			148



CITIZEN	OSDD 05A-WD 3.5" 720K in 5.25" KIT	59
CITIZEN	OSDA 39C-WD 3.5" 1.44mb in 5.25" KIT	69
CITIZEN	OSDD 76A-WD 3.5" 720K AMSTRAD KIT	59
AKHTER	AMS 360A 5.25" AMSTRAD 2000 360K External	79
YE DATA	360 INTERNAL 5.25" 360K	59
TEAC	1.2 INTERNAL 5.25" 1.2mb	69
JAVELIN	HC20 20mb XT HARD CARD, 62ms	185
JAVELIN	HC30 30mb XT HARD CARD, 62ms	199
JAVELIN	HC40 40mb AT HARD CARD, 25ms	SPECIAL 399
JAVELIN	HC100 100mb AT HARD CARD, 19ms	SPECIAL 899
KYOCERA	KC 20B(s) 20mb XT/AT DRIVE, 62ms, 3.5"	138
KYOCERA	KC 30B(s) 30mb XT/AT DRIVE, 62ms, 3.5"	158
KYOCERA	FRAME 5.25" kit for 3.5" hard drives	5
XT 20	HD CONTROLLER XT MFM	44
XT 30	HD CONTROLLER XT RLL	44
AT 20	FD/HD CONTROLLER AT MFM	110
AT 30	FD/HD CONTROLLER AT RLL	114
AKHTER	MDM 2400 PC CARD MODEM V21/V23, V22, V22bis (inc software)	135

MDM 2400
PC CARD MODEM
£135 INCLUDING SOFTWARE

AMSTRAD	FX 9600T FAX MACHINE	529
AKHTER	FAX SWITCH AUTO SWITCHES CALLS TO FAX OR PHONE	59
DF-NET-300	ETHERNET CARD Novell/Ms-NET compatible	143
XT 88-8mhz	MOTHERBOARD nil RAM	69
AT 286-16mhz	MOTHERBOARD nil RAM	199
AT 386-16mhz	MOTHERBOARD nil RAM	549
PC/XT CASE	FULL SIZE XT CASE	55
PC/AT CASE	BABY SIZE AT CASE	73
XT-PSU	150W (full approvals)	78
KEYBOARD 84	84 KEY UK LAYOUT XT	41
KEYBOARD 102	102 KEY UK LAYOUT XT/AT	52
576K RAM CARD	– XT	27
2mb EMS RAM CARD – specify XT or AT		93
DMS200 SERIAL MOUSE – Includes DR HALO III software		38
XT MULTI I/O CARD (RS232/printer/clock/ floppy controller)		54
AT I/O CARD (RS232/printer)		54
XT RS232 CARD		19
AKHTER 250W U.P.S.		199

RAM CHIPS/CO-PROCESSORS – CALL FOR PRICES OF DRAMS, SIP'S & SIMMS.
THIS IS ONLY A SMALL SELECTION OF OUR HARDWARE RANGE – CALL FOR DETAILS

Technology Centre

HOLE HOUSE FARM, BURNLEY RD., CLIVIGER, LANCS., BB11 3RF

Tel.& Fax: 0282 831900 (24 HOURS)

YOUR FORMAT

MACHINE SPECIFIC COLUMN

SCHOOLYARD TALK

Gordon Fyfe (no, nothing to do with the banana company) wrote to ask how many STs have been sold to date. "My friends at school keep telling me that the Amiga has sold more. Is that true?"

No it isn't, Gordon, not by a long chalk. Not by a long chalk and a half, even.

In fact, the ST is well ahead, and likely to remain so for some considerable time – not least because of Atari's planned price cut of £100, which takes effect in April. (It's not exactly a price cut, since it involves cutting the bundled software, but in any case it should help boost sales a lot.)

Atari insists that the total number of STs sold in the UK to date is in excess of 250,000. I understand that 100,000 were sold in the UK alone last year. (Incidentally, more STs are sold in the UK than in any other European country, with the sole exception of West Germany, where the total last year was more than 150,000 sales). The Amiga, on the other hand, has yet to pass the 200,000 mark. So there.

OFF THE SHELF

Kuma has just released an upgrade of the best-selling *K-Spread* spreadsheet program. The new version, wittily and at the same time pithily entitled *K-Spread* 4, features macro support, 200 statistical data management, arithmetic and conditional functions and improved access to graphing and page layout.

GDOS is included in the package to enable users to perform sideways printing. A printer driver is available separately for the Atari laser printer. *K-Spread* 4, which costs £130, is available from Kuma on 0734 844335.

Can you remember that ridiculous contraption Clive Sinclair launched all those years ago called the C5? Sort of a sheltered bicycle, apparently designed to give passing lorries something to aim for when turning left?

Well, this is nothing to do with the C5. But HiSoft has released Lattice C Version 5 (C5, geddit?), which is kind of odd, since as I recall the last release was version 3. There are a whole heap of improvements, too numerous to mention here, and the program is available from Hisoft on 0525 718181 for £99.95. If you already have version 3, an upgrade will cost you a mere £59.

What is more, the latest release in the already heavily-populated CAD market is Abacus' *Becker CAD*, a complex but extremely well implemented three-disk package that is PostScript compatible. And so it should be, at £229. Phone Abacus on 0706 524304.

NOW IT'S STAKESPEARE

Did you know William Shakespeare's greatest hits are now available on ST disks? Did you, huh?

A company called, for reasons that I think should be obvious, Complete Works Publishing, has produced some of the immortal bard's best gear on *1st Word* format on three disks, each priced at £6.95. That lot gives you nine plays, including *Julius Caesar, Richard III, The Tempest, Hamlet* and *Macbeth*, with the rest to follow – they have waited 400 years, another few months won't hurt.

Next up for the ST treatment are those perennial favourites Oscar Wilde, William Blake and William Wordsworth. Further information from Complete Works Publishing on 0403 86438.

CHEAP AT THE PRICE

Should you happen to have £1,625 about your person that you've no particular use for, you could do worse than parting with it in exchange for the poetically-named LRZR650, the latest laser printer for the ST from the very strangely entitled Mekon Computer Products Ltd. (If that name inspires you with confidence you're easily inspired).

The new machine it is said, at 1.3 square feet, is to have the smallest footprint (ie, the room it takes up on your desk) of any such device available . The LZR650 has two paper hoppers, a claimed printing speed of six pages per minute, 4.5Mb memory, and five printer emulations as standard – including HP LaserJet II, Epson FX80 and IBM Proprinter. Further details from those Mekons on 021-766 6886.

Additionally, Software Express has released Cricit Bar Code Plus, a bar code reader, integrated cash register and inventory control system that enables you to carry out such operations as sales, adding, deleting, editing and viewing stock by scanning that curious collection of thick and thin lines you find on just about everything you buy.

This, of course, is unlikely to have too many of you jumping up and down with excitement ('Great, I can read bar codes! Quick, pass the phone'), but it does indicate how the ST is continuing its steady advance into what sometimes gets called 'productivity markets.' I prefer to call it simply 'serious software.'

Cricit Bar Code Plus comes as a complete system including an ST and a monitor, printer and software. Hence prizes start at just this side of a grand (now you know why it's called serious software). On the off-chance this could be just what you're after, phone the good people at Software Express on 021-643 9100.

ON THE STREETS

Despite front page headlines in a computer magazine (not *Express*, I need hardly add), Ocean has of course secured the rights to *Robocop II* as everyone always expected it would.

Indeed software development manager at Ocean, Gary Bracey, has said that the company has been working hard on the game for going on two months already!

In addition, things continue to look up for the beleaguered ST upgrade, the STE, with news that Digital Integration is to release a special STE compatible version of *F-16 Combat Pilot*.

And in case you missed it, Dirk Brzesinski, Peter Karl and Markus Hess, the three young German men accused of breaking into computer systems and selling secrets to the KGB recently received suspended sentences of between 12 and 14 months each.

The trial over, and a figure of DM90,000 (about £34,000) put to the takings, German television went on to bring to the light of day the kit that had been confiscated from the undercover operation.

And guess what the men had been using with their modems and so on? That's right: an ST.

A POORLY DISGUISED PLUG

Young Bob Crossley, 16, of Swindon wants to know if the ST is any good at animation, and if so what the best program is. Since Bob is still at school and is therefore unlikely to have made his first million yet, I can suggest nothing better to him then to purchase the very latest issue of *ST Format*.

For, on the cover disk of that magazine he will find ANI.ST, a program I've mentioned several times in this column. It's a very highly rated animation program that used to cost £80 until very recently, when its author retrieved the rights and put it in the public domain.

Furthermore, inside *ST Format* there's even a tutorial that should help you to get started, Bob! All this (and so much more) for a mere £2.95 – such remarkable value. Thank you and good night.

SOUNDS FASCINATING

Word has reached me that more than one company is working on a device to record sound directly to hard disk. The theory is that you use the ST as a very high-quality digital recording machine with accurate editing facilities. It's an idea that's been around for some time, but its appearance on the comparatively cheap ST would be a great boost.

Steve Carey

ST GAME of the WEEK

RAINBOW ISLANDS

OCEAN • £19.99

In the history of games development, success comes on the heels of success. And Ocean's last cutesy game was *New Zealand Story* which climbed all the way up to the top of the charts.

***Rainbow Islands*, the follow-up to *Bubble Bobble*, is also cutesy even though it has something of a complicated licensing background. Indeed, the computer conversion licence for *Rainbow Islands* started life under MicroProse's name, but after a legal wrangle with Taito – the coin-op company behind the arcade version – Ocean ended up scooping the licence.**

And what a scoop! *Rainbow Islands* was a mega-hit in the arcades, and the computer version looks to follow.

The heroes of the game are Bub and Bob and they must progress through seven stages that masquerade as seven different islands. On each island there are platforms, and Bub and Bob must gain the top of each platform.

To scale the platforms you can leap up to ledges but your best option is to fire rainbows into the sky. You can then scamper up these rainbows. As you learn to anticipate the game, you can fire rainbows and climb up at quite some rate.

Your potential for amassing a large score in the shape of collectable fruit is astounding. Not only is fruit scattered across most platforms but thousands of points can be found when you reach the goal.

But life isn't all a bed of jumpsuits and clod-hoppers: the island is positively hopping with insects and other offending creatures. Dodging them while trying to complete the platform adds that litle extra to the game.

The first few levels are no problem, but once these have been mastered, the game starts to become difficult. Fortunately, rainbows come in handy. You can kill creatures by firing rainbows at them. Alternatively, if the creature gets caught in the loop under the rainbow, it stays stuck until the rainbow disintegrates.

With graphics downloaded from the arcade version and with superb playability, no sacrifices have been made in converting *Rainbow Islands*. As a result, you end up with a game that is certain to ride the charts skyward.

Mark Higham

PLAYING TIP

CHAOS STRIKES BACK

If you bought *Chaos Strikes Back* at Christmas and still haven't completed it, here's a tip:

There is a secret armour room which you can reach by walking through part of the wall in the armoured worm room where your quest begins.

TAKE OFF WITH AKHTER

CALL US ON (0279)411111

286 SPECIAL OFFER

- 80286 processor operating at 12MHz
- 1Mbyte RAM expandable to 4Mb
- 40Mbyte 25 Millisecond fast hard drive
- 14inch colour VGA monitor
- Microsoft compatible mouse
- MS-DOS 4.01 and windows 286

ONLY

£1395.00

AKHTER COMPUTERS LIMITED

386 SPECIAL OFFER

- 80386 processor operating at 20MHz
- 1Mbyte RAM expandable to 8Mbyte
- 40Mbyte 25 Milliseconds fast hard drive
- 14inch colour VGA monitor
- Microsoft compatible mouse
- MS-DOS 4.01 and Windows 386

ONLY

£1795.00

12 MONTH FREE ONSITE WARRANTY
GUARANTEED 8 HOUR CALL OUT

HOW TO ORDER

Our telephone lines are open between 9.00am until 6.00pm Monday to Friday. Our telesales team are qualified to answer questions on our products. If you need more in-depth information our technical support team will be on hand.

For more information on all our product ranges contact us now for your full colour Akhter catalogue and price list on our SALES HOTLINE number (0279) 411111.

ATTENTION EDUCATION SECTOR

Discounts are available to the Education Sector, contact our Educational Division for prices and product information.

Akhter House, Perry Road, Harlow, Essex, CM18 7PN, UK. Tel: (0279) 443521 Fax: (0279) 442623.

AMIGA

INTO THE UNKNOWN

The universe is, and always has been an interesting place. For thousands of years man has gazed in awe up into the heavens at the endless reaches of spaces. Now you and your Amiga can explore the universe with the release of *Distant Suns*, which comes from HB Marketing and Virtual Realities Laboratories.

Distant Suns is the follow up to that hugely-underrated package *Galileo*. The program provides one feature that astronomers hitherto could only dream about – the ability to view the night sky at any time in history (well, 8000 BC to 12000 AD is your limit), from any point on the globe.

The program contains 2,200 stars, 450 deep sky objects in an authentic, astronomically-correct sky. If this wasn't enough, the American producers even supply an expansion disk to add a further 9,100 stars to the program.

Distant Suns is available from HB Marketing, the good people who can be contacted on 0895 444433.

A1000 SAVIOUR

With the impending release of both Kickstart 1.4 and the Enhanced Chip Set, it seems that Commodore has forgotten A1000 users. Thankfully, third party developers have not.

One company in particular that A1000 users have to thank is Delaware Valley Software, who are soon to start shipping a board that will breathe new life into Commodore's original (and arguably the best) Amiga.

The Delaware Wonder Card is a very clever little device, indeed. It slots in as a replacement to the Kickstart daughterboard inside the A1000. This board then allows the Amiga 1000 to use both the ECS and Kickstart 1.4 (ROM-based).

Not only that, but once the ECS is installed, the A1000 can access all the new ECS screen modes and has the ability to use up to a megabyte of chip RAM.

Optional extras include a battery backed clock, an audio filter switch and the ability to software select between 1.2, 1.3 and 1.4 of the Amiga OS. How can an A1000 owner live without such a device? (My A1000 is going to get one as soon as they are available over here in dear old Blighty!)

Needless to say, as soon as it is available I will review this wondrous piece of hardware. Until then, Delaware can be contacted on 0101 215 446 9227.

TRACKERBALLS UP

Ever wanted an alternative to your mouse? What you need is a trackerball.

Until now there has been a rather surprising gap in the Amiga trackerball market. However, after many years of waiting, the Amiga is soon to gain not one, but two of the blighters.

Trackerballs have many advantages over the mouse. For one, unlike a mouse, a trackerball requires no space for movement, which is essential if you're a musician. The use of a trackerball can also enhance many games. Most obvious among these is Electronic Arts' excellent *Marble Madness* (still, after all these years, one of my favourites), which was originally designed around the trackerball.

First up is the FT-100 from HB Marketing, originally developed for use on the PC. This rather nice looking unit sits snuggly at the side of your keyboard, and provides three control buttons that replace both mouse buttons.

The FT-100 also includes a very nifty latching mechanism, which (once selected) allows the left mouse button to be set as if it is effectively held down permanently – another click of the button and the latch is turned off. This feature can be particularly useful when working with the Workbench, as windows can be resized and dragged with ease.

Next up is the old Atari favourite from Hard Edge Communications. This unit has been available for the Atari ST for just over a year now and has gone down relatively well among Atari owners. Although Hard Edge's unit can also be utilized as a mouse replacement, it comes into its own when used with games software.

For more information about either of these units, contact either HB Marketing on 0895 444433 or Hard Edge Communications on 0742 665719.

Jason Holborn

PLAYING TIP

INSANITY FIGHT

When the going gets tough – the tough break the rules.

For all you *Insanity Fight* fans who are finding the alien blasting too much to handle, here's a little cheat sent in by reader Steven Kelly (who is, despite the uncanny similarity, not related to Steve 'Bitmap' Kelly).

All you must do is to press both mouse buttons, the 'L' key and the fire button, and you will be instantly zapped through onto the next level.

TYPHOON THOMPSON

AMIGA GAME of the WEEK

Domark • £24.99

Every so often, a game appears that is so silly that it screams for attention. *Typhoon Thompson* is one such game.

The plot is serious enough, revolving around a lost passenger starship last seen near the planet Aguar. Reconnaissance missions have revealed that the only survivor is a toddler, who is now being held captive by the mischievous sea sprites.

You play the heroic Typhoon Thompson, a somewhat reluctant hero who has been pressured into taking the mission to rescue the child. To do so, you must shoot the sprites out of their hovering flyers and collect them from the water before they can swim back to their islands. Once all the sprites from a village have been caught, they can be traded for one of the four artifacts needed to release the baby.

You are not completely alone however, since the planet Aguar has a strange race known as the Spirit Guardians, who look after the good and helpless. They revere the 'Sea-Child' (as they call the baby) and offer you magic to help you defeat the sprites.

The Aguarians supply you with the ability to regenerate your dead body a limited number of times as well as giving you additional weapons for use when the sprites become more difficult to defeat.

Throughout the game, Typhoon Thompson gets into humorous situations. The captain of the rescue mission doesn't take kindly to Thompson trying to chicken out of the quest, and the sprites get into rather a strop when you win!

Add to the entertaining animations and humour some simple, but involving, gameplay and you come up with a deceptively-playable and infuriatingly-addictive cartoon action number in a similar vein to many of those scintillating early Broderbund classics.

In the final analysis then *Typhoon Thompson* is not to be missed!

Maff Evans

DESIGNER SOFTWARE

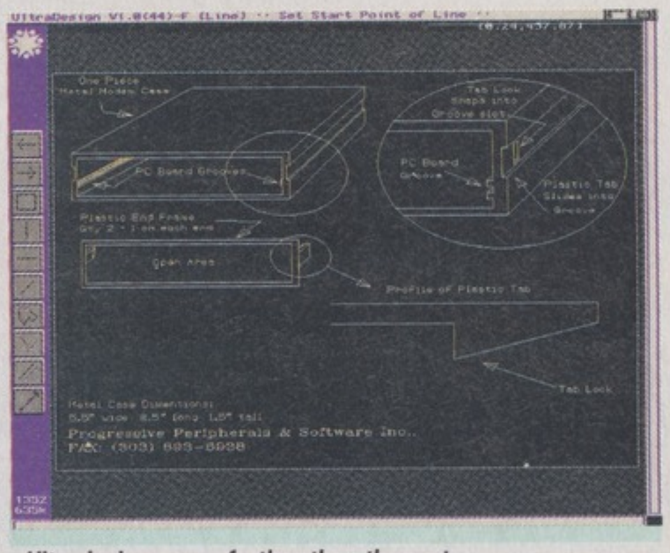
The world of CAD is a tough nut to crack for low-end machines. While the Atari ST has failed completely to be taken seriously as a contender in the CAD market, the Amiga is doing rather nicely, thank you.

This success can be attributed to a software package that has single-handedly done more to promote the Amiga as a professional CAD workstation – CADVisions' *X-CAD Professional*.

Following on from the Amiga philosophy of 'power without the price' (OK, so Atari coined the expression, but it's more suited to the Amiga anyway), *X-CAD* provided true CAD workstation power without a CAD workstation price.

Even in its first release, *X-CAD* managed to leave the competition for dead on both the Amiga and on its nearest CAD rival, the PC. With a redraw rate that was eight times faster than *AutoCAD* running on a 386 PC, *X-CAD* took the Amiga CAD world by storm.

Latest arrival on the Amiga CAD scene is *UltraDesign*, from Progressive Peripherals & Software (the company responsible for PIXmate and the Marcam Frame Grabber). *UltraDesign* is a professional CAD system designed to run on all 1Mb Amigas and it provides many advanced features to suit the needs of even the most demanding of designers.



• Ultradesign: *goes farther than the rest*

Features include drawing tools for multiple lines, arrowheads, arcs, ellipses & boxes, automatic line generation, razor lines, rubber banding and fillets. Text support includes 18 fonts with user-definanable size, aspect ratio and slant, text rotation, reversing, flipping, inverting, editing and styling. If things start to slow down when a large number of text characters onscreen, *UltraDesign* includes a custom QTEXT module that turbocharges text rendering.

Layers are all important within a CAD system, and thankfully *UltraDesign* certainly isn't starved of features to handle them. For starters, up to 65,535 different layers can be defined (which should be more than enough for most).

Layers can be added, deleted, renamed, merged, coloured, etc. Other features include linear units, precision drawing tools, extensive object manipulation (copy, move, scale, rotate, etc), hatching and filling.

This is where most CAD systems would stop, but *UltraDesign* goes on. Most important is the ability to directly read and write *AutoCAD* DXF drawings as well as *Aegis Draw*, *IntroCAD*, HPGL and DXY files. Drawings can be pasted up and printed using either standard preference printers or, for the highest possible output resolution, in Postscript format (both normal and encapsulated).

***UltraDesign* is handled by Marcam Limited: phone 01-941 6117.**

Dowling COMPUTERS

MAIL ORDER DIVISION

HEAD OFFICE:
Unit 48
Tyne Road
Sandy, Beds, SG19 1RB
Tel: 0767 81750/60
Fax: 0767 81730

Access VISA

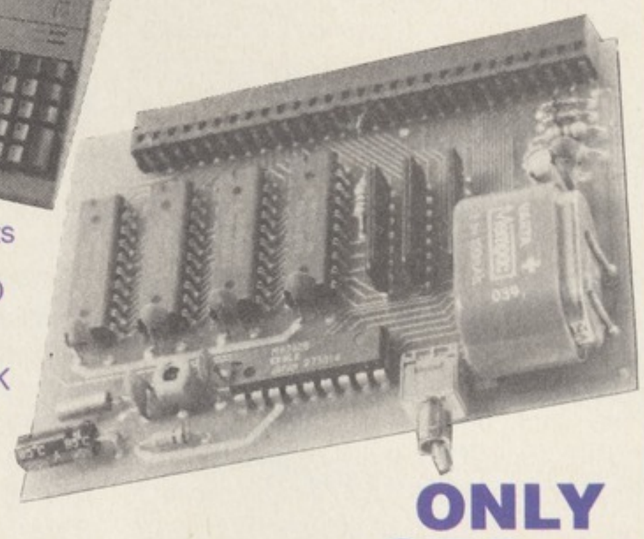
ALL PRICES INC VAT PLUS A FULL 1 YEAR GUARANTEE

AMIGA COMPUTERS & ACCESSORIES

FULL 1 YEAR GUARANTEE	RRP	OUR PRICE
AMIGA 500 + Mouse, modulator, Workbench 1.3, manuals etc	£379.99	£339.99
AMIGA 500 BATMAN PACK, inc DPaint II, Batman the Movie, etc	£399.99	£349.99
AMIGA 500 BUSINESS PACK, inc Protext, Superbase & Maxiplan	£679.99	£449.99
AMIGA 500 CLASS OF THE 90'S PACK, inc Publishers Choice, BBC Emulator	£573.85	£499.99
DOWLING AMIGA PLUS PACK - available only with above TENSTAR Games Pack + 10 3 1/2" disks mouse mat + Dustcover + Joystick	£249.99	£39.99
CBM1084S Stereo Colour monitor	£309.99	£244.99
CUMANA 1 meg quality drive - The Best!	£89.99	£79.99
AMIGA 500 Power Supply Unit	£69.95	£59.95
AMIGA A520 TV Modulator	£24.99	£19.99

THE MEGABOARD RAM EXPANSION 500

UP-GRADES YOUR AMIGA A500 FROM 512K TO 1 MEGABYTE!



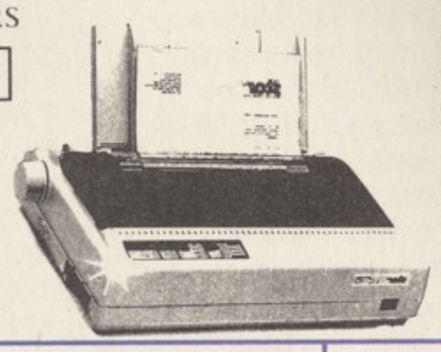
FEATURES
- Only top quality components used
- Real Time clock with NICAD battery backup
- Memory disable switch to revert back to original 512K
- 12 months guarantee. Fully tested prior to despatch

Purpose designed for the AMIGA A500

ONLY £59.95

THE Star COMPUTER PRINTERS

= Registered Dealer =



Being Star registered dealers we only sell official UK machines which come with a full 1 year guarantee. Beware of inferior imported products

OFFICIAL U.K VERSIONS	RRP	OUR PRICE
STAR LC10 mono 144/36 C.P.S	£229.95	£149.95
STAR LC10 II 25% faster version	£263.35	£169.95
STAR LC10 Colour, 7 colours	£297.85	£189.95
STAR LC24-10- 24 pin multifont	£343.85	£229.95
STAR LC10 Sheet Feeder (auto)	£74.75	£49.95
STAR LC10 Mono Ribbons	£5.95	£3.95
STAR LC10 Colour Ribbons	£7.95	£5.95
STAR LC24-10 Ribbons	£7.95	£5.95
STAR LC10 Quality Dust Cover	£7.95	£5.95

★ 3 1/2" DISKS ★ 3 1/2" DISKS★ ★ 3 1/2" DISKS ★

All our disks are of the highest quality, are 100% certified and have 'made in Japan' stamped on each disk. We guarantee each disk is either Sony, TDK or JVC unbranded.

50	£29.99
100	£57.99
200	£99.99
400	£179.99
Roll of 1000 labels	£9.99

ART, BUSINESS AND MUSIC PACKAGES FOR THE AMIGA 500

FOR THE MORE DISCERNING COMPUTER USER	RRP	OUR PRICE
ART		
Photon Paint II	£69.95	£29.99
Deluxe Paint II	£49.95	£9.99
Vidi- Amiga	£99.95	£89.95
BUSINESS		
Kindwords version 2	£99.95	£49.95
Superbase 2	£99.95	£49.95
Maxiplan Spreadsheet	£99.95	£49.95
MUSIC		
Aegis Sonix version 2.0	£69.99	£34.99
Music - x 'state of the art music package'	£229.95	£149.99

NEW - CLASS OF THE 90's UPGRADE PACK

PACK COMPRISES OF THE FOLLOWING:-
Midi Master Interface (£34.99), DPaint II (£49.95), Publisher's Choice (£99.95), Maxiplan 500 (£99.95), Superbase Personal (£59.95), Dr T's Recording Studio (£49.95), BBC Software Emulator (£49.95), Amiga Logo (£82.00), Mouse Mat (£4.39), 10 Blank Disks (£9.99), 1 years subscription to Amiga User (£23.00).

RRP £564.07 **OUR PRICE £199.99**

★ THIS MONTH'S SOFTWARE BARGAINS FOR THE AMIGA 500★

HURRY - LIMITED STOCKS	RRP	OUR PRICE
Batman The Movie	£24.99	£6.99
F18 Interceptor	£24.99	£6.99
New Zealand Story	£24.99	£6.99

ORDERING MADE EASY

Order by phone by calling our Head Office quoting your Access/Visa Number

Order by Post - make Cheques, Building Society Drafts or Postal Orders payable to Dowling Computers

Add £6.00 courier delivery for all orders over £100.00. Add £2 P&P for orders under £100.00.

YOUR FORMAT

MACHINE SPECIFIC COLUMN

SPECTRUM

MORE SAM

The Miles Gordon Technology SAM Coupé has only been out for a month or so and already it seems to be building up an enthusiastic base of owners, many of whom have written to me to praise the machine.

MGT isn't relaxing now that the machine is finally on to people's MFI Computer Workstations, either. The company has lots more complementary hardware ready for release.

One up-and-coming piece that has passed through design and manufacturing is a nifty 'add-on' box. MGT says this will allow third-party developers to use the SAM expansion connector.

Indeed, the first two products to make use of this box are available and ready to expand the Coupé's horizons. They're the SAM External Drive Interface, which includes a parallel printer port, and a Communications Interface.

Each of these products is available for the price of £34.50. Phone MGT on 0792 791100 for more details.

Staying with the SAM, a public spirited chap by the name of Graeme Robertson has been busily testing his extensive software collection, and he tells me the following titles are definitely compatible with the Coupé: *Manic Miner, Penetrator, Obliterator, New Zealand Story, Bosconiqan '87, Hacker 2, Dan Dare, Fantasy World Dizzy, Olli & Lissa 3, Intensity, Renegade 3, Last Duel, Olli & Lissa, Hotshot, Netherworld, Vindicators, Northstar, Chain Reaction, American Turbo King, Dynamic Duo, Vectorball, Captain Fizz, Aliens, Gun Runner, Space Harrier 2, Jumping Jack* and *Enlightenment — Druid II.*

MORE GOLD

Not content to lie back and count the mounds of gold from its CD Games Pack venture, CodeMasters is working hard to keep up its traditional business of churning out well-programmed budget games with dodgy titles.

Super Dragon Slayer is the latest result of the CodeMasters' budget-game-dodgy-title-devising department and – unusually for a cheapo – offers multi-load levels and a choice of games.

Disappointingly though, the gameplay is decidedly run-of-the-mill stuff and basically entails guiding the rather weedy looking hero of the piece through four 'magical wastelands'. Naturally, each level is thick with monster types that need lightning bolts between the eyes.

You can also pick up spell books and there are a total of five different types of spells to cast, but in the end it boils down to a wholly-unsatisfying experience with colour clash approaching psychedelic levels.

Much better in my opinion is another new CodeMaster's release – *Italian Super Car*. This is a plan-view driving game with an original concept, and it is not often you see one of those.

The object is to race your Italian sportscar through minefields, past other cars and over the jumps all found on a film set. There's also a tight time limit and you've only got three takes in which to complete each scene.

The graphics are functional rather than snazzy, but it's good fun to play and I'll admit to a minor bout of addiction. All in all, more fun than owning a Reliant Robin and, at £2.99, cheaper.

Robin Alway

THE COMPANY STRIKES BACK

If there's one software company that we Speccy owners hold dear to our hearts, and carry a picture of in our wallets, it's Hewson. Over the years this firm has produced a constant stream of highly-original and everlastingly-playable games.

This knack for brilliance has built the company a formidable reputation which is why 4th Dimension, a compilation of four previously unreleased Hewson games, is such a huge disappointment. The four games aren't completely useless, but by Hewson's previous record, look like budget fodder.

For more details and a full verdict purchase the next super soaraway issue of *Your Sinclair*, due in the shops on March 18 and, as it's now a Future publication, you can purchase without feeling disloyal.

Incentive Software's Driller may be getting a little frayed around the edges nowadays but Robert J Baker, of London, is pretty sure a complete solution has yet to appear in print and so hoisted me over a fully comprehensive guide for finishing the thing once and for all.

However, owing to the cramped confines of this column and the shortage of mature Scandinavian pine forests at the moment, I find myself unable to include the whole darned playing guide in its entirety. Instead, here are Robert's Multiface pokes for the game plus the solution to the very last sector. Robert's reward for this mammoth feat of tipping is a free budget game.

48246,0 Infinite shield
47926,0 plus 49022,0 and 49425,0 Infinite energy
47896,0 Infinite time

There are seven switches in Trachyte; the five in the frame before you plus one in the floor and a proximity switch which detects your movements. Move until the left middle and bottom switches are showing, then switch to Attack Mode and shoot in the following order: bottom, middle, right, floor. Do this correctly and the frame disappears.

Having done that, you have a force field to get through. It has a blind spot; drive along X=6282. The 18th rig can, in fact, be placed in any sector but only in Trachyte will you get the end game sequence in all its glory. The drilling point is 4103,6559 facing the rear wall.

PCW

BURNS UNIT

Recently a lot of PCW owners have been worried about leaving their machines on for long periods of time. This is actually what you ought to do – switching the unit on and off repeatedly doesn't do the electronics much good because of the constant surges of power.

Good PCW practice dictates that you switch the thing on in the morning and off at night, without worrying about stretches of a few hours in between when it's not used (it only consumes as much power as a light bulb).

However, leaving the screen on can cause damage after very long periods. Look at a monitor on a BR platform and you'll see constantly displayed phrases 'burned in' to the screen permanently in black (phrases such as 'We apologise for the delay of this train', etc).

There isn't much you can do about this in *LocoScript*, but if you work in CP/M this BASIC listing will blank the screen until the next key press. Save it as BLANK and to blank the screen type:

```
BASIC BLANK[RETURN].
10 OUT 248,8 : A$=INPUT$(1)
20 OUT 248,7 : SYSTEM
```

A TIP THAT COUNTS

Man has an obsession with numbering things: Ten Commandments, Seven Steps to Heaven, Birmingham Six, Fabulous Four, Fifth Dimension, Chiltern Hundreds, etc. And in case you haven't guessed, you can have *LocoMail* number things for you automatically – ideal for references or lists of items.

At the beginning put the command `(+Mail) F=0 (-Mail)`. Then every time you want a number put `(+Mail) +F (-Mail)`, adding `(+Bold)(+SupeR)` before and `(-Bold)(-SupeR)` after if you want them to appear as superscripts.

'Fill' the completed document and *LocoMail* numbers the +Fs in sequence. So no mistakes caused by your missing out a reference or putting the same thing twice or misnumbering; and no problem if you realise you've missed one out. Just insert another +F at the appropriate point and re-fill.

B#, C?

English composer William Walton was once held up for eight months while writing his oratorio *Belshazzar's Feast* because he couldn't decide what note should go with the word 'gold'. And he never had a PCW.

The astonishing music package *The Composer's Pen* - which lets you prepare and print out musical scores to professional standard very quickly and easily, unless you get stuck on words like 'gold' – is now available in a version that takes full advantage of those lucky enough to own 24-pin printers. So now you can be sharp, see? (Actually B sharp is not C, strictly, but they are enharmonically equivalent). Details from Composit, that can be reached on 021-456 1967.

PATHETIC JOKE!

Been watching *A Sense of Guilt* on the BBC recently? Unfaithful old rascal Felix, played by Trevor Eve, has a PCW. Perhaps this is something to do with a CAD package. What do you think?

Rob Ainsley

MSX

A FOREIGN AFFAIR

I have been lucky enough to purchase a copy (second-hand) of Turbo 5000, the Universal Cartridge for the MSX 1 and 2 computers, and I thought that you might be interested to learn about some of its more useful features.

This device is on ROM, and was originally distributed in the UK by Robtek of Holland, although it seems that it is no longer available here, apart from second- hand that is – so a trip to the continent may be needed if you wish to purchase this device.

To use the cartridge, slot it into one of the MSX cartridge ports, turn on the power, and a brief message tells you that it is resident in memory. Function key 2 enables you to Call Turbo, after which a menu will appear, and you can access some of the many functions of this cartridge.

Firstly, you can make a hardcopy of all active screens 0 to 8 and use any MSX-, Epson- or IBM-compatible printer to print out text screens 0 and 1.

Next, we have a Turbo Load feature, to speed up saving and loading. Tape to tape, tape to disk, and disk to disk backups can be made and along with a directory of programs – all addresses being displayed. Deleted disk files can be recovered just by loading the disk and typing in the file name.

Turbo 5000 also has full disk handling routines and can read all hex and ASCII sectors including format info, boot sector and hidden files. MSX-DOS can be called up from the program, even if you do not start up with DOS.

As you can see, this device looks to be a useful piece of kit. The cartridge is supplied with a well-written manual and seems at first glance an easy device to use. If only life were that simple.

Even now I am still trying to get to grips with all its features and I find that some programs will not back up, even using memory shifts, etc.

Perseverence, as always, is the order of the day with *Turbo 5000*, and eventually you will most likely find that it is a useful and capable device and well worth seeking out.

STORMING LETTERS

I have had a flood of mail recently, some from MSX users requesting a list of MSX software retailers, and many cards replying to the competition in which I asked you to name the 12 games that Kixx produce for the MSX.

As many of you have already pointed out, there are, in fact, 13 Kixx games available, and 14 if you count the soon-to-be-released *Indiana Jones and the Last Crusade*.

Anyone who has already replied to this competition, never fear, if you have named 12 of the 14 titles you will be included in the draw.

The result of the competition will be published in two weeks' time, so if you want to enter, send in a card to *Express* pronto. There will be two winners.

The first prize is to be a copy of Sub Logic's *Flight Simulator* and *Torpedo Attack*, kindly donated by Capri Marketing of Marlowe, Bucks and the second prize will be US Gold's *Chicago '30s*, donated by yours truly.

Keith Neal

CPC

A TRIUMPH OF REASON

I've received a letter from Simon Lee, of Newcastle upon Tyne, who's got a few words to say about the 464 versus 6128 debate.

"I'm sure most CPC users have heard the phrase, 'My 6128's better than your 464', but really all we're doing is arguing among ourselves. Shouldn't we instead be 'united'? After all, we are all Amstrad users.

"But what would be the consequences of dropping the 464? Well, the 464 serves as a low-cost entry into the computer world, as not all of us can afford a 6128 straight away. If we didn't have this low-cost entry, surely the Spectrums and Commodores would take over – well, almost! The 6128 is, after all, slightly expensive.

"I'm glad that, over Christmas, Amstrad realised the potential of the CPC. But what on earth posessed Amstrad to advertise the Spectrum on television but the CPC in the press? I'm sure that the CPC is about a thousand years ahead of the Spectrum in terms of sound and graphics.

"Anyway, on the subject of the 464/6128 'divide'. What if Amstrad dropped the 6128? As most users know, the 6128 can be used for almost anything from running a small business to controlling a space station (well, on the same lines, anyway) and will continue to be used as it has excellent business software and word processors available for it. But to put it in simpler terms, the 464 needs the 6128 to survive and the 6128 needs the 464 to survive. In my opinion, anyway."

A very good point Simon. I think the two machines do need each other. Most unusual of all, though, is hearing from someone who rates both machines. Is it my imagination, or is there just a hint of snobbery about owning a 6128? You know where to write to.

464 REVIVAL?

Of course, the whole debate about which machine is the best may take – probably will take – a different turn when the new, enhanced CPCs come out in September. If our information is correct, and the next machines do incorporate cartridge ports, then all of a sudden there's going to be little to choose – at least for games players – between the 464 and 6128.

Both will give near instantaneous loading and – perhaps more importantly – the extra 64K of RAM that the 6128 has will make no difference, since both machines will only need a small workspace in RAM to run the software.

It could, in fact, be a new beginning for the 464, at a time when most people were predicting nothing for the 464, nothing, that is, but the mighty chop!

JOE BLADE POKE

Joe Blade 3 – what a game! (What, a game?) If you're still having trouble wiping out the bad guys, here's an infinite-energy and infinite-ammo poke:

```
{HsAp} 1 'joe blade 3
{FrAj} 2 '
{DvAt} 3 'infinite energy + ammo
{FtAj} 4 '
{NrAs} 10 DATA 21,fa,ac,36,c3,23
{HkAt} 20 DATA 36,0e,23,36,be,c3
{AsAr} 30 DATA 00,ac,c4,14,ac,3e
{IiAt} 40 DATA c9,32,57,0f,fb,c9
{JwAs} 50 DATA 21,7f,41,36,8f,21
{EwAt} 60 DATA cc,41,36,b3,21,2c
{HxAt} 70 DATA 42,36,f9,c3,05,40
{MlAq} 80 MEMORY &3000:y=0
{FnAs} 90 FOR x=&BE00 TO &BE29
{NtAt} 100 READ a$:a=VAL("&"+a$)
{KiAt} 110 POKE x,a:y=y+a:NEXT
{JjAu} 120 IF y<>&1117 THEN 150
{HwAm} 130 LOAD""
{MtAp} 140 CALL &BE18
{OvAq} 150 PRINT"data error!"
```

Rod Lawton

DOCTOR DOOM'S DAY

The time has come for all you comic-readers to come clean. No, I'm not talking about the blooming *Beano*, either. I mean proper comics, Marvel-style.

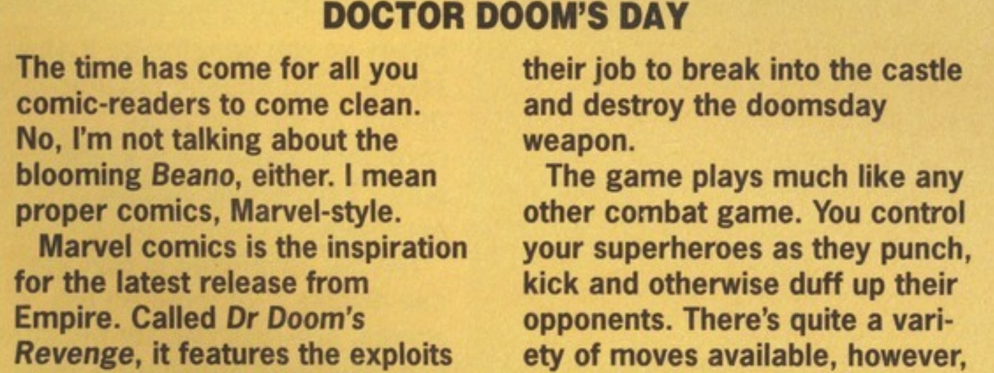
Marvel comics is the inspiration for the latest release from Empire. Called *Dr Doom's Revenge*, it features the exploits of a dynamic duo of a different nature. Captain America and Spiderman are our heroes, and they're up against the demonic Doctor Doom and his legions of heinous henchmen.

The plot is a simple one. Doctor Doom has made off with a horribly-destructive thermonuclear device, but Captain America and Spiderman have traced him to his castle headquarters. It's now their job to break into the castle and destroy the doomsday weapon.

The game plays much like any other combat game. You control your superheroes as they punch, kick and otherwise duff up their opponents. There's quite a variety of moves available, however, as your actions have differing effects according to how far from your enemy you are.

Gameplay, then, doesn't sound the deepest you'll ever encounter. And it's not – but then *Dr Doom* has other attractions.

Chiefly, there's the wonderful sprites and animation. Empire has really captured the look of the comic-book heroes, including Captain America's gymnastics.



• Dr Doom's Revenge: *excellent between-level screens and plenty of action.*

C64

YOU BETTER YOU BET

Fancy winning a fortune on the football pools – trotting down to the local betting shop and finding the six horses that will transform themselves into a winning accumulator? Chance would be a fine thing then.

Still, there are companies around who are producing software for the C64 which is designed to help you achieve your goal of immense wealth. If the software was that good, surely the program designers would use it just the once and become instant millionaires?

Ours is not to reason why, ours is to write to Boxoft and acquire further details. It can be found residing at 65 Allans Meadow, Neston, South Wirral L64 9SQ.

CHEAPER THAN EVER

Some of you may have been thinking of adding the Oceanic disk drive to your C64 system. Some of you may already have done so, but if it was for a brand new drive, then I'll be willing to bet (I seem to have betting on the brain this week) that you paid more than a round £104.95 for it.

That is the price being asked for by Microsnips, and included in that sum is postage and packing. The disk drives have a lot to recommend them, being smaller, faster and quieter than Commodore's own range of 5.25-inch drives. And, of course, they are cheaper.

For full details write to Microsnips at 37 Seaview Road, Wallasey, Merseyside L45 4QN. Or if you fancy a chat over the telephone, why not give them a call on 051-630 3013?

A LITTLE COMMENTARY

Companies that acquire the rights to produce computer games based on the exploits of such legendary figures as Batman and Indiana Jones obviously have to recoup their financial outlay.

Companies that acquire the rights to produce C64 versions of popular coin-op games equally obviously have to do the same. Wouldn't it be nice (to coin a song) if we had original ideas for a fiver or less rather than what are sometimes pretty dodgy tie-ins and copies for a tenner or more? What do you think? Seen the awful *Beverley Hills Cop* yet?

POKES FOR NOTHING

Players of *Turbo Out Run*, which is currently coining plenty of gold for its suppliers, can treat themselves to unlimited time on the disk version with the following cartridge pokes.

The pokes! For load 1, `POKE 16034,173`. For load 2, `POKE 16005,173`. For load 3, `POKE 16034,173`. Last, but not least, for load 4 you'll have to `POKE 16060,173`.

GAME FOR ADVENTURE

Scapeghost from Level 9 seems to be going down well, so for a little ghostly help you might care to keep following Joe Danby, push the urn when you're strong enough in order to impress David Ridge, remember that Violent Conway is blind not deaf and recruit the Colonel by making the vandals think that there's a night watchman roaming about.

Pete Gerrard

YOUR FORMAT

PC 10
ST 12
Amiga 14
Spectrum 16
PCW 16
MSX 16
CPC 17
C64 17
Atari XE 18
QL 18
Archimedes 18
BBC 18

QL

ITALIAN QL USERS

There was an Italian QL users meeting that took place last September, but details have just now made it into the QUANTA newsletter.

SPEM Proprietor, Guido Masoero, announced a new hard disk system, similar to the Miracle unit. It's about seven times faster than a floppy disk.

Guiseppe Zanetti has developed a DTP program, claimed to be powerful and suitable for unexpanded machines.

Romaldo Parodi showed his expansion card, giving an additional 192K of EPROM/RAM, with battery back-up for the RAM. It can be used in conjunction with a 512K RAM expansion. Programs can be stored in the RAM, avoiding the need for an EPROM programmer.

Roberto Innocenti has discovered a way to get more colours (up to 32), without stipples, in Mode 4!

Augusto Delsante demonstrated his QL film animation program. Using the SPEM video digitiser to capture images stored on a VCR, he is able to animate them at 25 frames per second – TV speed. The program requires a 640K QL and about 10 sequences are available, lasting up to 3.5 seconds.

QL PROLOG

Following the launch of the QL, Sinclair was very interested in putting PROLOG on it. PROLOG (PROgramming in LOgic) is the language often used for so-called artifical intelligence applications like 'Expert Systems'.

The project never went ahead, but Hans Lub, of Utrecht in Holland, has developed his own version of a PROLOG interpreter for the QL, based on the standard implementation.

He wrote most of the interpreter in C, with the critical portion matching questions against rules and facts, and coded in assembly language to create the maximum speed.

John Torofex

QUANTA SUBGROUPS

QUANTA, the QL user group, has spawned a number of local subgroups, information about which I've published from time to time. Here is the latest listing that includes several new ones. You don't have to belong to QUANTA to join one of these groups.

Berks, Alex Waye, 0235 833284
Birmingham, Bedford White, 021-708 2560
Bristol, Chris Gregory, 0272 513653
Bucks, Alex Waye, 0235 833284
Devon, Roy Johnson, 0395 275290
East Anglia, George Katsoulis, 0842 753843
Essex, Trevor Watson, 01-592 5928
Leicester, Peter Ash, 0533 766857
Merseyside, Don James, 051-652 7366
Mid-Anglia, Peter Rowell, 0954 210692
Mid-Cheshire, Alex Robertson, 0270 500565
Northampton, Terry Harman, 0604 842875
Oxon, Alex Waye, 0235 833284
Solent, Graham Evans, 042121 3350
Wilts, Alex Waye, 0235 833284

BBC

SOUNDING OFF

BBCs have long been used by semi-professionals, musicians and educationalists as musical tools, partly, of course, because of their cheapness, availability and excellent interfaces. Much of the credit, however, must go to Ample, a full-featured music programming language pioneered by Hybrid Technology.

As a standard in its own right, many programs exist that take advantage of Ample's basic structure to transform the musical output of your BBC. One such is *Basic Music Composition* from Tobin Music. Derived from the Tobin Music System, a well-known musical literacy course developed over the last 25 years, *Basic Music Composition* is intended to teach good habits from an early age.

This reviewer is, unfortunately, too old for many new good habits, but I was certainly pleased to discover even my feeble efforts made tuneful by the program. There is the nub of the issue – it won't let you make 'mistakes', but at the same time does not limit your creativity, either.

In a classroom, used as part of the curriculum, this approach is ideal, but it may not suit the budding Beethovens among you. Overall *Basic Music Composition* is a workmanlike, if unspectacular, package that includes everything needed in the classroom, including Econet and Music 5000 system compatibility. And that is it for the moment, further thoughts will follow if (and when) Music 5000 Universal becomes available for review.

A PEAK OF THE DECADE

Most exciting news of the decade (so far) for BBC games fans, and, let's face it, that means everyone, is the impending conversion of *Sim City*, the mega game from Infogrames.

For those who don't read the games magazines, *Sim City* gives you the chance to play at being city fathers (or mothers). You must build up your city from humble beginnings, building roads and hospitals and overcoming disasters both natural and man-made.

The great strength of *Sim City* is in its graphical interface – so it will be fascinating to see if Superior Software's wizard programmer, Peter Scott, can pull off the feat by recreating it on the BBC. Don't hold your breath though, as summer is likely to arrive before *Sim City*.

Much nearer completion is the conversion of *Hostages*, another Infogrames classic. My knowledge of this is even sketchier than *Sim City*, but I do know that action and strategy are mixed up in this simulation/arcade game. Again, as Peter Scott is in charge of the coding and, knowing his legendary finishing speed, I expect to be reviewing the game in full within the next few weeks.

Superior deserves congratulations for forging links with such an illustrious software house from the 16-bit world. With Steve Hanson reporting an excellent working relationship, it could develop into something that lasts, too.

Andrew Brown

XE

ON THE AIR

I've spent a happy week exploring the arena of Atari 8-bit communications, huddled over a keyboard and modem with only the phosphorescent glow of the monitor to light the darkness. Let me whet your appetite with fruit of my labours – that is provide for you a description of the best BBS (bulletin board service) in the UK.

Comms – isn't that the domain of the 16-bitters? That's what I thought until I discovered The City, an incredible bulletin board devoted to all things 8-bit.

A bulletin board is a computer version of the pin board you have at work or school. Users can call up the board, leave messages, exchange software and generally interact with other 8-bitters.

The City is a BB based in Birmingham, run on and supporting the Atari 8-bit. Unlike most bulletin boards however, the layout and configuration of the The City is decided by its residents!

The City is organised just like a real city. When first you dial the board, you're given the status of visitor. You can have a look around, leave a message or two, but your actions are limited.

With resident status, the fun begins. Once a resident, you can create areas within the City and mould the BB to your own specification. You can rise from Resident through Guardian to Sentinel and the entire board will be layed bare to your excesses – more next time.

Meanwhile, for initiated comms users, enter The City, by phoning 021-353 5486, 8N1, V21/V23 24 hours per day.

Edmund Blake

ARCHIMEDES

DOS TO RISCOS

Further to the file transfer feature in *Express 68*, I've recently seen the *!PCdir* utility working on an Arc. This is a useful little routine as it gives you extra drive icons in the icon bar, labelled A:, B: and so on.

These icons can be clicked on like any other, but the drives will then read and write MS-DOS disks rather than Arc ones. With this utility you can transfer data to and from PC disks with ease and even copy files from one MS-DOS disk to another, though you can't currently format DOS disks on the Arc.

What a worthwhile utility, but only one of several on Careware disk 4 from Norwich Computer Services. Careware is akin to shareware, but £6 of the £7 cost is later donated to charity. Nice to think you can do something for a good cause while picking up worthwhile software at a decent price.

And nice to think there are enough philanthropic programmers out there to make the concept possible. Norwich Computer Services, which also publishes *Archive*, its user group newsletter, is on 0603 507057.

GIVE US A HINT

In the geriatric but comfortably-off PC world a lot of fuss is being made about the DTP page description language PostScript and Adobe's Type 1 *hinted* fonts. Rival companies which also publish fonts maintain that Adobe's hinting is rubbish, anyway.

All Acorn's Arc fonts are hinted, as are several of the third-party fonts available, including The Font Foundry's mentioned last week (about which more next week).

What is hinting, anyway? When using scalable fonts the characters are produced from a series of mathematically-defined lines and curves.

As you scale the characters down, the lines of which they're composed get thinner and thinner. There comes a point when some lines will be so thin that they will disappear on a comparatively low resolution device like a laser printer. This is particularly true of serifs on fonts below 10 points in size.

Hinting forces any line thinner than a printed dot (one three hundredth of an inch on a typical laser) to be rounded up to one dot thickness. This ensures that parts of characters don't disappear and gives a better appearance to the characters, at the expense of true accuracy to the form of the character.

The other kind of hinting, which is related to the first, is to do with the place a given character falls on the matrix of dots in a printer.

There are occasions when, for instance, the two legs of an 'H' may fall unevenly within the matrix, so that one leg falls on a line of dots while another falls between two lines. This can lead to an uneven character form. Hinting ensures that all the legs or uprights of a character are printed with the same width.

Glad you asked?

Bertrum Carrot

MODE WORKS

The way an Arc is configured, you might very well have come to think that there were only two screen modes available, numbered 12 and 15 (all right, and 21 if you've a multisync monitor). In fact, of course, there are quite a few more.

One of my own favourites is mode 17. This is particularly handy as you can display it on a standard Acorn-type monitor – though at the limit of its resolution. Mode 17 is 1,056 pixels horizontally by 256 vertically.

The big advantage is that you can display a lot more on the screen. The icon bar, for instance can take more application icons, and you can open more windows of usable size.

A friend of mine – the one who boots up with the 440 and all the trimmings – runs his Arc in this mode when using *Acorn DTP*. He can also keep a file directory open at the top of the screen for multi-tasking a text editor, art package or whatever.

This option runs with a full-page window in the DTP open. Ultimately, however, this manner of operating is only comfortable long term on a multisync, while ideal for desktop work on virtually any screen. Further, to change modes, run the Configure application or press [F12] and enter `*Configure WimpMode nn`, where nn is the mode number.

520ST-FM SUPER PACK

The Atari Super Pack is ideal for you if you want to get off to a flying start with the best in entertainment software. The Pack includes a 520ST-FM with ½Mb RAM, a built-in 1Mb disk drive, over £450 of top games and a joystick. If you buy the Super Pack at Silica Shop, we will add our own ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for details.

£399
INCLUDING VAT

1Mb DISK DRIVE
£450 OF SOFTWARE

ARCADE GAMES

Arkanoid II	Imagine	**£19.95**
Beyond The Ice Palace	Elite	**£19.95**
Black Lamp	Firebird	**£19.95**
Buggy Boy	Elite	**£19.95**
Chopper X	Mastertronic	**£9.99**
Ikari Warriors	Elite	**£14.95**
Marble Madness	Electronic Arts	**£24.95**
Quadralien	Logotron	**£19.95**
Ranarama	Hewson Consultants	**£19.95**
Return To Genesis	Firebird	**£19.95**
Roadwars	Melbourne House	**£19.95**
Starquake	Mandarin	**£19.95**
Test Drive	Electronic Arts	**£24.95**
Thrust	Firebird	**£9.95**
Thundercats	Elite	**£19.95**
Wizball	Ocean	**£19.95**
Xenon	Melbourne House	**£19.95**
Zynaps	Hewson Consultants	**£19.99**

SPORTS SIMULATIONS

Eddie Edwards Super Ski	Elite	**£19.95**
Seconds Out	Tynesoft	**£19.95**
Summer Olympiad '88	Tynesoft	**£19.95**

PRODUCTIVITY SOFTWARE

Organiser	Triangle Publishing	**£49.95**

JOYSTICK

Atari CX40 Joystick	Atari Corp	**£4.99**

FREE ATARI BUNDLE VALUE: £458.97

With SM124 mono monitor: £498 INC VAT With SC1224 colour monitor: £698 INC VAT

1040ST-FM PROFESSIONAL PACK

NOW WITH TV MODULATOR

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for further information.

£499
INCLUDING VAT

ATARI 1040ST-FM	(Computer)	**£499.99**
VIP PROFESSIONAL	(Spreadsheet)	**£149.95**
MICROSOFT WRITE	(Word Processor)	**£149.95**
SUPERBASE PERSONAL	(Database)	**£59.95**
BASIC DISK & MANUAL	(Language)	**£24.98**

NORMAL RRP: £884.82
LESS DISCOUNT: -£385.82
PROFESSIONAL PACK PRICE: £499.00

With SM124 mono monitor: £598 INC VAT
With SC1224 colour monitor: £798 INC VAT

2Mb & 4Mb MEGA ST

The MEGA ST computers are styled as as lightweight keyboard with a separate CPU, connected by a coiled telephone style cable. There are two versions of the MEGA ST, one with 2Mbytes of RAM and the other with 4Mbytes. Each version has a 1Mbyte double sided disk drive built-in to the CPU unit. The MEGA ST's do not come with modulator built-in and must therefore be used with a monitor. With every MEGA ST purchased, we will add the 'Professional Pack' software (worth £384.83) detailed above, plus the Silica ST Starter Kit (worth over £200) both Free Of Charge. Return the coupon for further details.

2Mb MEGA ST
£899 INC VAT
+mono monitor = £998
+colour monitor = £1198

4Mb MEGA ST
£1199 INC VAT
+mono monitor = £1298
+colour monitor = £1498

DTP PageStream £149 +VAT =£171.35

Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £149 (+VAT=£171.35) and, because it works with an Atari 1040ST and a Seikosha SP-180AI printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the 'DTP' box in the corner.

* TEXT-FLOW AROUND GRAPHICS
* ROTATION OF TEXT & GRAPHICS
* SLANT OR TWIST ANY OBJECT
* POSTSCRIPT COMPATIBLE
* TAG FUNCTION
* AUTO/MANUAL KERNING & HYPHENATION
* GROUPING OF OBJECTS

DO YOU OWN AN ATARI ST?

If you already own an Atari ST computer and would like to be registered on our mailing list as an ST user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist ST service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order) **01-309 1111**
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
OPEN: *MON-SAT 9am - 5.30pm* ***LATE NIGHT:*** *FRIDAY 9am - 7pm*

LONDON **01-580 4000**
52 Tottenham Court Road, London, W1P OBA
OPEN: *MON-SAT 9.30am - 6.00pm* ***LATE NIGHT:*** *NONE*

LONDON ..... **01-629 1234 ext 3914**
Selfridges (1st floor), Oxford Street, London, W1A 1AB
OPEN: *MON-SAT 9am - 6.00pm* ***LATE NIGHT:*** *THURSDAY 9am - 8pm*

ATARI ST

ST COMPUTERS

The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge of the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established in the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For a full list of the software available, as well as details of the ST range, complete and return the coupon below.

All prices correct at the time of going to press. E&OE.

520ST-FM EXPLORER PACK
WITH BUILT-IN 1Mb DISK DRIVE

The value for money offered by the Atari ST range is reflected in the Explorer Pack featuring the 520ST-FM computer with 512K RAM. The 520ST-FM computer now comes with a built-in 1 Mb double sided disk drive as well as a free mouse controller and a built-in TV modulator. The new 520ST-FM Explorer Pack includes the 520ST-FM computer, the arcade game Ranarama, a tutorial program and some useful desktop accessories. In addition, if you buy the Explorer Pack from Silica, we will give you the Silica ST Starter Kit worth over £200, FREE OF CHARGE. Return the coupon for details of our Starter Kit and of the full ST range.

£260
ONLY £2.51 PER WEEK
RETURN COUPON FOR DETAILS
+VAT= £299

+ SM124 mono monitor: £398 INC VAT + SC1224 colour monitor: £598 INC VAT

WHY SILICA SHOP?

Before you decide when to buy your new Atari ST computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer and expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Atari ST related products in the UK, a full time Atari ST specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years with an annual turnover in excess of £8 million and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. But don't just take our word for it. Complete and return the coupon below for our latest literature and begin to experience the Silica Shop specialist Atari service.

SILICA STARTER KIT: Worth over £200, FREE with every Atari ST computer bought from Silica.

PROFESSIONAL PACK: Free business software with 1040ST-FM and MEGA ST's bought from Silica.

DEDICATED SERVICING: 7 full-time Atari trained staff with years of experience on Atari servicing.

THE FULL STOCK RANGE: All of your Atari requirements from one place.

AFTER SALES SUPPORT: The staff at Silica are dedicated to help you get the best from your ST.

FREE CATALOGUES: Mailed direct to your home as soon as we print them, featuring offers as well as all of the new releases.

FREE OVERNIGHT DELIVERY: On all hardware orders shipped within the UK mainland.

PRICE MATCH PROMISE: We will match competitors on a 'same product same price' basis.

FREE TECHNICAL HELPLINE: Full time team of Atari technical experts always at your service.

FREE SILICA STARTER KIT WORTH OVER £200

WITH EVERY ST - RETURN COUPON FOR DETAILS

ALL PRICES QUOTED INCLUDE FREE UK DELIVERY

To: Slica Shop Ltd, NCE 0390 , _1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX

PLEASE SEND FREE LITERATURE ON THE ATARI ST

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

.....

.....

..... Postcode: .....

NCE 0390

Do you already own a computer
If so, which one do you own? ..... DTP ☐

UK HOME COMPUTERS

INTERNAL MODEMS

For IBM PC's & Compatibles

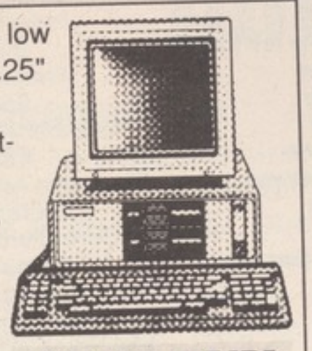
* BAUD RATE SCAN ON DIAL
* 2 LEVEL CONFIGURATION
* BELL TINKLE SUPPRESS
* HAYES COMPATIBLE
* BT TELEPHONE SOCKET
* 1200/75 BAUD
* 300/300 BAUD
* DATATALK SOFTWARE
* £40 TELECOM VOUCHER
* SPEED BUFFERING
* AUTO RE-DIAL
* RESET FACILITY
* AUTO ANSWER
* AUTO DIAL
* 75/1200 BAUD
* MADE BY PACE
* FULL INSTRUCTUIONS
* COMPLETE PACKAGE

THIS PACKAGE CONTAINS ALL THE EQUIPMENT NECESSARY TO COMMUNICATE VIA: PRESTEL, TELEX, ELECTRONIC MAIL, BULLETIN BOARDS, FILE TRANSFER. SUITABLE FOR ALL IBM'S & CLONES.

OUR PRICE £79.95p plus £3.05p Post

ERICSSON PC/XT

Check the features against our low price. 640K RAM, Twin 360k 5.25" disk drives, 4 expansion slots, MS-DOS 3.3, Hercules compatible CGA Card, Twin serial & parallel ports, Battery back-up, 91 key keyboard, measures only 15"X12"X5.5",BROTHER 12" Hi-Res Amber Monitor, 8087 Co-Processor socket, & fully IBM Compatible.



BEST BUY

OUR PRICE £449.95p

This price includes VAT, Carriage & 3 Public Domain Programs, i.e. Word-processor, Database, & Spreadsheet. Send for details.

3.5" UNCASED DRIVES

Top-Quality Slim-Line disk drives made by Fujitsu & Citizen.Available in either 1Mb or 2Mb unformatted capacity. Suitable for most micros including PC's & ATARI ST. 5.25" Cradle available for the Citizen drives at only £12.00p inc. Post

1 Mb DISK DRIVE £49.95p
2Mb DISK DRIVE £54.95p

Postage & Packing £3.05p

MICROSOFT WINDOWS

Version 2.0, 5.25" disks plus comprehensive manual. Probably the most useful package for the IBM PC & Clones. Package also includes FREE Microsoft PAGEVIEW. A WINDOWS utility. Normal price for both packages is around £80-£90p.
Send today. Stocks are very limited.

OUR PRICE £29.95p

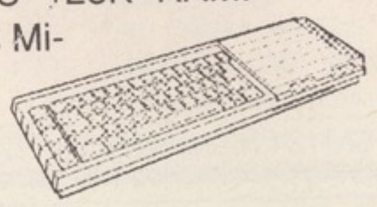
Postage & Packing £3.05p.

PC NETWORKS

The offer of the Year. The complete AMSTRAD 3-Station Network Sytem as reviewed by PC-PLUS January 1989. Now you can afford to link upto 3 Amstrad PC's or IBM compatibles at a fraction of the original cost. This package comes complete with all interfaces, cables, connectors etc. and full documentation. Send TODAY for the full package details together with a copy of the PC-PLUS review. The original price for this package was £399.00p plus VAT. Our Price is just £199.00p. including VAT & Postage. There is just one catch. Stocks are very limited so order early to avoid disappointment. **£199.00p fully inc**

SINCLAIR Q.L.

Fast 68008 CPU 128K RAM.
Twin fast-access Microdrives.



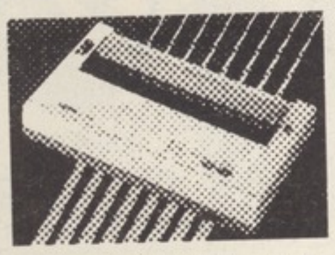
Complete with all manuals, cables, PSU, and software (Wordprocessor, Database, Spreadsheet, & Graphics.)

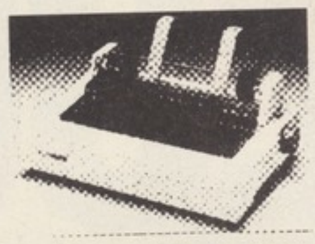
JM ROM £99.95p
JS ROM £119.95p

Postage & Packing £4.05p.

DISCOUNT PRINTERS

TOP BRANDS - LOWEST PRICES





BROTHER M1109 £129.95p
BROTHER M1209 £149.95p
CITIZEN LSP 100 £149.95p

Postage & Packing £5.05p

PC AT/XT KEYBOARDS

Top-Quality 101 key-keyboards made by ZENITH DATA SYSTEMS. Standard AT layout, and switchable between PC/XT & PC/AT. Don't put up with your inferior keyboard any longer, at our price you can afford to upgrade NOW! Standard 5-Pin DIN Connection makes this keyboard compatible with almost all IBM's and clones. Stocks are very limited so send today!

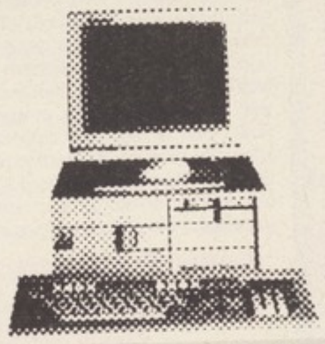
OUR PRICE £39.95p inc. Post

ZENITH OWNERS

We have just concluded a big deal for a vast quantity of ZENITH accessories and parts. From SKYFAX Modems to EAZY-PC Memory modules. From diagnostic packs to Software transfer packs. Send today for our full details and enclose details of your machine..

SAMSUNG 6000/1 PC/AT

A top-branded PC/AT at an XT price. 80286 Processor with a 6/10 MHz speed. 1Mb RAM, 6 expansion slots, 1.2 Mb 5.25" floppy, 102 key keyboard, battery back-up, Hercules/Monochrome Video Card, RS232 & Parallel Ports, MS-DOS 3.2 & GW-Basic.



£599.00p
Plus VAT & Carriage

SEND FOR DETAILS

Our all-in price of £700.00p includes the Brand New Samsung, an Ex-Display Mono Monitor, & O/N Delivery.

BARGAIN BASEMENT-TO CLEAR

AMSTRAD PPC512 SINGLE DRIVE	£359.95
AMSTRAD PPC 512 DOUBLE DRIVE	£449.95
8087-8MHz MATHS CO-PROCESSOR	£50.00
MICROSOFT BASIC	£7.50
GW BASIC COMPILER	£10.00
COMMODORE PLUS 4 D/DRIVES	£59.95
COMMODORE C64 MUSIC SYSTEM	£29.95
SHARP PC 4501A MEMORY UPGRADES PER 128K RAM SET	£33.00
AMSTRAD 12" MONO VGA MONITOR	£79.95

PHONE FOR AVAILABILITY & CARRIAGE COSTS

Access VISA

VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of Sale, available upon request. Personal callers welcome by appointment. All prices include VAT. All goods Brand New unless expressly stated otherwise

UK HOME COMPUTERS
82 CHURCHWARD AVENUE,
SWINDON,WILTS, SN2 1NH.
0793 695034

BEST SHOPPING EXPRESS

- Bargains
- Advice
- Prices
- Offers
- Jobs

The *weekly* computer market place for people *serious* about buying

● THIS WEEK'S BUYERS' GUIDE

MODEMS PRINTERS & PORTABLES

The hardware buyer's bible for those essential peripherals

STARTS ON PAGE 23

JOB SHOPPING?

Check out our recruitment section inside

ALSO INSIDE

● **Take** advantage of our latest mail order offers.

● **Benefit** from our reliable buyers' guides. No waffle, just facts.

● **Pick up** bargains galore from dealers and readers from all over the UK.

● **Score** on the free reader adverts. Sell your products for *absolutely no charge!*

Save your cash, save your time

DOLAN ELECTRONICS LIMITED

DANFFORDDGAR HOUSE
CARMARTHEN, DYFED
SA32 7DU.

SALES: 0267 234444
FAX: 0267 231863

Access

all prices ex VAT & Delivery
CWO or COD available

VISA

specifications subject to change.

£399!

12MHz XT

★ 640Kb RAM expandable to 1Mb on board
★ 12MHz CPU switchable to 4.77MHz
★ 102 Key Keyboard
★ 360Kb 5 ¼" Floppy Drive
★ 2 Serial Ports
★ 2 Parallel Ports
★ Real Time Clock/Calendar
★ 5 Free Expansion Slots
★ Hercules Graphic Card & High Res Mono Monitor
★ EZ-DOS vers. 4.01 & Basic
★ Full Set of Manuals & Documentation

Single Drive 12" Green Mono System £399
40Mb 30Ms 12" Green Mono System £599
14" Flat Screen Paper White Mono .. add..£35
14" EGA Colour Monitor ..... add..£226
720Kb 3 ½" Floppy Drive..... add...£65
640Mb to 1Mb RAM Upgrade..... add..£45

£795!

16MHz 386-SX

★ 1Mb RAM expandable to 8Mb on board
★ 16MHz CPU switachable to 6MHz
★ 102 Key Keyboard
★ 1.2Mb 5 ¼" & 1.44Mb 3 ½" Floppy Drives
★ 2 Serial Ports
★ 2 Parallel Ports
★ Real Time Clock/Calendar
★ 5 Free Expansion Slots
★ Super VGA Card w/256Kb RAM High Res Mono Monitor
★ EZ-DOS vers. 4.01 & Basic
★ Full Set of Manuals & Documentation

Dual Drive Mono System as above £795
20Mb 40Ms Mono System £995
45Mb 25Ms Mono System w/32Kb Cache £1145
14" VGA Colour Monitor ..... add...£200
14" Super VGA Colour Monitor .... add...£350

£2195!

33MHz 386

★ 4Mb RAM expandable to 16Mb on board
★ 33MHz CPU Landmark Speed 44MHz w/32Kb Cache
★ 102 Key Keyboard
★ 1.2Mb 5 ¼" & 1.44Mb 3 ½" Floppy Drives
★ 45Mb 25Ms Hard Drive w/1:1 Interleave 32Kb Cache
★ 2 Serial Ports
★ 2 Parallel Ports
★ Real Time Clock/Calendar
★ 5 Free Expansion Slots
★ Super VGA Card w/512Kb RAM 1024x768 High Res Mono Monitor
★ EX-DOS vers. 4.01 & Basic
★ Full Set of Manuals & Documentation

Complete System Mono £2195
Complete System VGA Colour £2345
Complete System Super VGA Colour £2495
130Mb 18Ms Hard Drive Upgrade .....add...£350

MISCELLANEOUS

XT 40Mb 40Ms Hard Drive Kit £199
XT 40Mb 40Ms Hard Card £215
AT 45Mb 25Ms Hard Drive £275
60mb Internal Tape Backup £450
60Mb External Tape Backup £425
360Kb 5 ¼" Floppy Drive £40
1.2Mb 5 ¼" Floppy Drive £55
720Kb 3 ½" Floppy Drive £65
1.44Mb 3 ½" Floppy Drive £85

Microsoft Windows vers 2.03 ..... £25
Logotron 8 in 1 software £30
Genius Mouse w/Dr-Halo Software £35

The **DOLAN COMPUTERS** have the reliability, performance and price that leaves the competition standing. Our professional quality systems come fully configured and ready to run. The DOLAN COMPUTERS were the outright winners in a recent survey of over 50 computers.

The DOLAN COMPUTER range are unbeatable on specification and price.

THE SHOPPING EXPRESS BUYERS' GUIDE TO PRINTERS, MODEMS & PORTABLES

The first peripheral most people buy is a printer – a word processor is pretty useless without one! Here we present the Express guide to dot-matrix printers, together with some advice on portables and modems

PRINTERS

Every computer owner needs a printer. From the largest corporate business to the smallest home user the time will come when you need more than what's shown on screen, you'll need hard copy.

● AMSTRAD DMP4000

0279 454555
£349
9-pin • 200cps draft 50cps NLQ • 8K buffer • Epson compatible

Bottom of the usable range Amstrad printer, which is unsophisticated, provides only adequate printing quality and which is expensive when compared with similarly-specified machines from other manufacturers. The device is both Epson and IBM compatible.

Power ★★★

Value for money ★★

● AMSTRAD LQ3500

0279 454555
£349
24-pin • 160cps draft 54cps NLQ • 8K buffer • Epson compatible

Amstrad's weird and wonderful pricing structure has ensured that this 24-pin printer offering roughly similar specifications to the DMP400 but a vastly improved print quality is the same price – and you can find good discount deals. 160cps draft speed for a 24-pin dot matrix machine is outrageously slow and the 8K buffer doesn't excite thrills of desire.

Power ★★

Value for money ★★★

● AMSTRAD LQ5000

0279 454555
£449
24-pin • 288cps draft 96cps NLQ • 8K buffer • Epson compatible

One of the best from the Amstrad stable. Featuring reasonable print speeds, a wide carriage and built in tractor feed as standard, the machine is worthy of consideration by small business persons.

Power ★★★★

Value for money ★★★

● BROTHER 1109

061-330 6531
£195
9-pin • 100cps draft 20cps NLQ • No buffer • Epson compatible

Expensive, underspecified printer from well-known manufacturer Brother who really needs to try harder. Almost £200 for a printer which doesn't have a printer buffer indeed!

Power ★

Value for money ★

● BULL COMPUPRINT 4/20

01-568 9191
From £440
9-pin • 200cps draft 40cps NLQ • 7K buffer • Not Epson compatible

Available in a choice of carriage widths and optional serial or parallel interface, the Bull machine is an incredibly expensive, deathly ordinary dot matrix with little to recommend it. Unless you're a corporate buyer with the name Bull indelibly marked on your purchasing order forms, look elsewhere....

Power ★★★

Value for money ★

● CITIZEN HQP-40

0895 72621
£499
24-pin • 200cps draft 66cps NLQ • No buffer • Epson compatible

Citizen have been in the printer business for a number of years and although some of the company's early machines were a little strange, the latest printers are worthy of consideration. The HQP-40 is a fairly expensive, but well made 24-pin printer – but the lack of print buffer should be noted.

Power ★★★

Value for money ★★

● EPSON LX-850

0442 61144
£279
9-pin • 180cps draft 30cps NLQ • 3K buffer

Bottom of the range Epson 9-pin machine featuring two NLQ fonts, only moderate print quality but the great name Epson on the panel.

Power ★

Value for money ★

● EPSON EX-800

0442 61144
£629
9-pin • 300cps draft 60cps NLQ • 8K buffer

Epson is *the* name in the printer world. The company whose printer control codes have been adopted as an unofficial standard by almost all other manufacturers. The company's printers are well made, available everywhere and supported by all software. However, the popularity of Epson has ensured the price of the machines has remained inflated when compared with similarly-specified machines from other manufacturers. The EX-800 is fast, and of high quality construction. A optional colour adapter is available.

Power ★★★★

Value for money ★★★

● EPSON LQ550

0442 61144
£399
24-pin • 150cps draft 50cps NLQ • No buffer

Uninspiring 24-pin mid-range printer from Epson. Four built-in letter-quality fonts, friction and tractor paper handling and good quality printing.

Power ★★★

Value for money ★★★

● EPSON FX850

0442 61144
£459
9-pin • 264cps draft 54cps NLQ • 8K buffer

Fast but fairly expensive 9-pin machine featuring innovative cut sheet and fan fold paper handling, quality printing, and fast draft mode.

Power ★★★★

Value for money ★★★

● EPSON EX1000

0442 61144
£829
9-pin • 300cps draft 60cps NLQ • 8K buffer

One of the top of the range Epson 9-pin machines which has a fast draft printing mode, but has a tendency to lose the paper feed after 20 or 30 sheets have been processed. First choice for professional programmers needing listings.

Power ★★★★

Value for money ★★★

● EPSON DFX5000

0442 61144
£1,699
9-pin • 533cps draft 96cps NLQ • 3K buffer

➤

DATAPLEX

10 Petersfield Avenue, Slough,
Berkshire SL2 5DN
Tel: 0753 35557
All prices excluding
VAT and delivery

AMIGA HARDWARE

Amiga 500 + TV modulator £299
Amiga 500 + Batman Pack & 5 games, joystick £345.00

NEW BATMAN PACK £299 while stocks last!

New from Amiga
Includes: TV modulator, 3.5" Disk Drive with Amiga DOS Kickstart, Workbench and Batman The Movie game, F18 Inceptor, Paint 2, New Zealand Story.

AMIGA ACCESSORIES

Amiga Class of the 90's.....£429
Inc. database, spreadsheet, WP, music, art & design, logo and BBC emulator.

Amiga A501 RAM pack + Clock.....£99
Amiga joystick £10
TV Modulator.....£15
Phillips CM8833 colour monitor (inc. cable) .£219
Phillips BM7502 12" green monitor.....£79
Phillips BM7522 12" amber monitor.....£89
Amiga To Philips cable.....£8

AMIGA DRIVE

1 Meg 3.5" external.....£68
1 Meg 3.5" internal £63
1 Meg 5.25" external.....£99

ATARI DRIVES

1 Meg 3.5 external £68
1 Meg 5.25 external £99
1 Meg 3.5 internal £63

AMSTRAD COMPUTERS

Amstrad PCW 8256.....£319
Amstrad PCW 8512.....£399
Amstrad PCW 9512.....£419
Amstrad PC 1640 Single Mono.....£449
Amstrad PC 1640 Single Col £538
Amstrad PC 1640 Single ECD £625
Amstrad PC 1640 dual mono £515
Amstrad PC 1640 dual col £599
Amstrad PC 1640 dual ECD.....£689
Amstrad PC 1512, Amstrad hard disk version also available - Please ring for prices

STAR PRINTERS

Star LC10 mono.....£135
Star LC10 II mono £159
Star LC10 colour.....£168
Star 2410 .....£225
Star LC15 9 Pin 136 column.....£264
Star LC2415 24 Pin £328

PANASONIC

Unbeatable Prices!

Panasonic 1081 .....£125
KXP 1124 .....£219
KXP 1180 .....£144

CITIZEN PRINTERS

Citizen 120D.....£125
Citizen 180E.....£127
Swift 24 .....£255
Colour upgrade for Swift £42

MANNESMAN TALLY

Mannesman MT 81 Dot Matrix.....£115
Mannesman Sheetfeeder.....£62
Mannesman Serial Interface £49

REPAIRS FOR AMIGA AND ATARI

If you want a mega-fast printer this is your baby. At 533 characters per second in draft, this machine is the fastest of the Epson range. 96 characters in NLQ mode is fairly racing along too!

Power ★★★★★

Value for money ★

● IBM PROPRINTER III

01 747 0747
£442
9-pin • 320cps draft 65cps NLQ • 32K buffer

Fast, and with a huge print buffer and reasonable price tag (when compared with similar machines from Epson and Amstrad) the IBM is the first choice for the corporate buyer.

Power ★★★★

Value for money ★★★★

● IBM QUIETWRITER III

01-747 0747
£1,139
274cps draft 171cps NLQ • No buffer

Calling migraine sufferers everywhere! The Quietwriter III from IBM relies on thermal technology to provide whisper quiet operation at at a fast printing speed.

Power ★★★

Value for money ★★★

● MICRO PERIPHERALS MP165+

0706 217799
£198
9-pin • 190cps draft 32cps NLQ • No buffer • Epson compatible

Bottom of usable range Micro Peripherals printer which provides reasonable print quality and speed at a moderate price. Many dealers offer large discounts.

Power ★★

Value for money ★★★★

● MICRO PERIPHERALS MP200+

0706 217799
£299
pin • 240cps draft 40cps NLQ • buffer • Epson compatible

Fast, moderately priced printer which can accept a range of plug-in font cards ensuring the versatility of the printer. Good deals to be had.

Power ★★★

Value for money ★★★

● OLIVETTI DM250

0908 374900
£649
24-pin 180cps draft 60cps NLQ
24K buffer Epson compatible

Good quality printer from erstwhile typewriter manufacturer Olivetti. This device features a large print buffer and moderate printing speed. However, the price tag is just a little on the large side.

Power ★★

Value for money ★★

● OLIVETTI DM100/105

0908 374900
From £235
9-pin • 120cps draft 25cps NLQ • 7K buffer • Epson compatible

Unpretentious little matrix machine from Olivetti which can also be had in a colour version (DM105).

Power ★★

Value for money ★★

● PANASONIC KXP1081

0344 853915
£219
9-pin • 180cps draft 24cps NLQ • 1K buffer Epson compatible

Very popular do matrix printer from well-known manufacturer Panasonic. Reasonably specified, fully Epson compatible and available discounted at a price which will take your breath away this machine is the first choice for prospective printer purchasers with limited budgets.

Power ★★★

Value for money ★★★★★

● STAR LC10

0494 471111
£199 (mono), £259 (colour)
9-pin • 144cps draft 36cps NLQ • 4K buffer • Epson compatible

Like the Panasonic KXP1081, the LC10 from Star is a very popular, highly desirable dot matrix, featuring good specifications, full Epson compatibility and a colour option all at a breath-takingly small (discounted) price.

Power ★★

Value for money ★★★★★

PORTABLE COMPUTERS

There's never been a better time to buy a portable computer. Advances in technology, the breaching of the PC compatibles market by Amstrad and the price wars of the major manufacturers have all ensured that you can buy a pocket or laptop computer with processing power which previously would have occupied a room...

➤

★STAR PREFERRED CORPORATE SPECIALIST NATIONAL DEALER★

FREE HYPERDRAW/

FREE Pocket Calculator with every AMIGA

A M I G A

A500 BAT-PACK

INCLUDES:
- Batman The Movie
- New Zealand Story
- F18 Interceptor
- "D" Paint II
- Workbench 1.3
- Kickstart 1.3
- Amiga Basic
- Desktop Utilities
- New Tutorial Pack
- TV Modulator

£357.00

WITH TENSTAR PACK
£387.00

£50.00 SOFTWARE VOUCHER

HYPERPAINT/ FIRST WP

WITH EVERY ST & FREE

IBM/ST PROTEXT WORDPROCESSOR RRP £99.95 OUR SPECIAL £39.95

STAR

STAR RECOMMENDED CORPORATE DEALER

HOME AND BUSINESS SERIES	£ INC VAT
LC-10 9 PIN MONO	£159.00
COMMENT: EXCELLENT NEAR LETTER QUALITY EVEN IN ITALICS MODE	
LC-10 II MONO	£179.00
COMMENT: 25% FASTER, VERY ACCURATE LINEFEED FOR GRAPHICS	
LC-10 COLOUR	£197.00
COMMENT: LC-10 SPECS., COLOUR FEATURES NOW WELL SUPPORTED	
LC-15 9 PIN MONO	£306.00
COMMENT: IDEAL FOR LONG PRINT RUNS AND LABEL PRINTING	
LC24-10 24 PIN LQ	£239.00
COMMENT: LETTER QUALITY. EXTENSIVE FONT RANGE INCLUDING SCRIPT	
LC24-15 24 PIN LQ	£383.00

Approved by HEWLETT PACKARD LASERJET SERIES II (and compatibles)

SUPER CARTRIDGES

PostScript

PostScript Emulation Cartridge 35 Font Families Requires only 2 Mbytes of memory ONLY £545.00 plus VAT

25 cartridges in 1

Fonts from 25 different Cartridges in one 172 Fonts and 20 complete Symbol Sets Supports Portrait and Landscape printing ONLY £359.00 plus VAT

HPGL Plotter CART

Full HPGL Plotter Emulation 20 Black pens in user defined sizes of 0.003" to 0.16" Compatible with ALL major CAD / CAM software packages Plotting speed upto a 100 times faster ONLY £305.00 PLUS VAT

CLASS of the 90's

FREE F18 INTERCEPTOR worth £24.95

EDUCATION PACK

PACK BREAKDOWN

HARDWARE	£ INC VAT
Amiga A500 Computer	399.99
Midi Master Interface	34.99
TV Modulator	24.99
SOFTWARE	
Tutorial Pack	
Deluxe Paint II	49.95
Publishers Choice	99.95
Maxiplan 500	99.95
Superbase Personal	59.95
Dr. T's Recording Studio	49.95
Workbench 1.3	
Kickstart 1.3	
Desktop Utilities	14.99
BBC Software Emulator	49.95
Amiga Basic Language	
Amiga Logo Language	82.00
ACCESSORIES	
Mouse Mat	4.39
10 Blank 3.5" Diskettes	9.99
Disk Wallet	12.95
1 yr. Sub to Amiga User	23.00
Education support file (after 1 yr sub to Amiga User)	
TOTAL RRP	= 1016.99
PACK DISCOUNT	= 437.00

PROMOTION PRICE = 579.99

OUR PRICE = £509.00

BUSINESS, SCIENTIFIC, EDUCATION AND VIDEO GRAPHIC SOFTWARE

ST PC Speed (IBM PC Emulator)	£255.00
ST Mega Co-processor	£125.00
ST Macintosh Emulator (Runs 20% faster than a Mac Computer)	£229.00
Amiga Macintosh Emulator	£229.00
Cameron A4 Scanner (AM/ST)	£459.00
Amiga Flicker Master	£12.00
Amiga DOS to DOS (MS DOS File Converter)	£39.95
LC10 Mono ribbons	£3.50
LC10 Colour ribbons	£6.00
LC24-10 Mono ribbons	£4.50
FR/XB Mono ribbons	£12.00
Atari 1029 Mono ribbons	£4.95
100 x 3.5" disc box	£7.95
10 x 3.5" DS/DD discs	£7.35
60 gsm x 2000 sheet paper	£16.95
85 gsm x 1000 sheet paper	£12.95

520 STE EXPLORER PACK £278.00

520 STE POWER PACK PLUS £357.00

1040 STE HYPER PACK £435.00

MEGA 1 ST HYPER PACK £489.00

PORTFOLIO PORTABLE PC £235

ATARI 8 BIT XF 551 DISK DRIVE

£165.00

Very Very Limited Stock

FREE!! Utilities and tools pack with every ST purchase. Software Blitter, ST Diagnostics, Disk Editor/Custom Formatter, Disk Boot Construction Set, Alarm Clock, Quick Formatter, Calculator, Custom Format Disk Duplicator, Printer Customiser Tool, Desktop Games, ARC Construction Set, System Selector, 50/60 HZ Switcher and Synchronizer, Snapshot Dumper, RAM/Print Spooler, Word-processor **AND MUCH MUCH MORE!!**

AMIGA ADDITIONS

A500 3 1/2" 1 Meg Drive £75.00

1/2 Meg A500 RAM Upgrade with switch & clock....£84.00 without clock.....£69.95

All prices include VAT

COMPUTERHOUSE UK

TEL: (01) - 731 - 1276

14, ROMILY COURT, LANDRIDGE ROAD, FULHAM, LONDON SW6 4LL

Access | Access MasterCard | VISA

C&M MICROS

DON'T BUY DISKS OFFERING ANYTHING LESS !

All our disks have a lifetime money back or free replacement guarantee. Each disk is certified 100% error free and comes complete with labels and tabs (5 1/4").

31/2" bulk disks manufactured by SONY/VERBATIM
51/4" bulk disks manufactured by SENTINEL/VERBATIM

Bulk disks	10	25	50	100	150	200	300	500
3.5" DS/DD(135)	£7.50	£18	£34	£66	£96	£124	£180	£290
3.5" DS/HD(2Mb)	£22	£53	£100	£195	£283	£366	£531	£856
5.25" DS/QD(96/48)	£4	£9	£16	£30	£43	£56	£80	£130
5.25" DS/HD(1.6Mb)	£8	£18	£32	£60	£86	£112	£160	£260
3" DS (Maxell)	£23	£57	£112	£219	£327	phone for prices		

BRANDED DISKS MANUFACTURED BY THE SONY CORPORATION OF JAPAN.

Sony Brand		1-2	3-4	5-9	10+
3.5" DS/DD(135)	*Boxes*	£12.00	£11.50	£11.00	£10.50
3.5" DS/HD(2Mb)	*of*	£28.00	£27.00	£26.50	£26.00
5.25" DS/QD(96/48)	*10*	£11.00	£10.50	£10.00	£9.50
5.25" DS/HD(1.6Mb)	*disks*	£14.00	£13.50	£13.00	£12.50

Strong disk boxes. Lockable with 2 keys, dividers & recessed handle. Add £1 P&P if not ordered with disks.

3 1/2" 40 Capacity .....£4.50 80 Capacity £6.50
5 1/4" 60 Capacity .....£4.50 100 Capacity £6.50

COLOURS™ DISK PACKS. 10 coloured 3 1/2" DS/DD disks (2 of red, orange, yellow, green, blue) in a 10 capacity library case with labels and our lifetime guarantee.....Only £9.50
(Pic & Mix selections available, please phone for details!)

ALL PRICES INCLUDE VAT. P&P FREE (UK ONLY).
Orders below £15 in value carry a handling charge of £1.
Please phone or write for a FREE price list.

C & M Micros, Dept. NCE, 25 Middlefield Road, Bessacarr, Doncaster, S. Yorkshire. DN4 7EB.
We Accept EXPRESS VOUCHERS
Cardnet credit card hotline (0302) 539955
Access or cheques/postal orders payable to C & M Micros. VISA

FREE DISKS ! ! !
1 FREE DISK FOR EVERY 10 THAT YOU BUY

10 3.5" DISKS + BOX £09.00
25 3.5" DISKS £19.00
50 3.5" DISKS £33.50
50 3.5" DISKS + BOX £38.00
100 3.5" DISKS £63.00
100 3.5" DISKS + BOX £67.50

Access VISA

ALL PRICES INCLUDE VAT
ALL PRICES INCLUDE DELIVERY
ORDER DESPATCHED SAME DAY

mph COMPUTER SPECIALIST
10 CHANDLERS CT
EATON
NORWICH 0603 503382
NORFOLK

● AMSTRAD PPC512

0279 454555
£499
8086 CPU • LCD CGA screen • 512K RAM • Single/twin floppy drive(s)

Amstrad has a finger in every pie and the portable PC compatible market is no exception. The entry level machine is the PPC512, featuring a full sized keyboard, but poor screen, not much memory and not much else to recommend it. Look elsewhere...

Power ★★

Value for money ★★

● AMSTRAD PPC640

0279 454555
£799
8086 CPU • LCD CGA screen • 640K RAM • Double drives • Internal V21, V22, V22bis, V23 modem

When first launched, the media recommended the machine as being worth the price for the built-in modem alone. Although quite large and not very pretty, the Amstrad is nonetheless a very usable portable computer at a fantastically low price. Very worthy of your consideration and money.

Power ★★★★★

Value for money ★★★★★

● BULL PC AP-L

0422 212781
From £1,395
80286 CPU • 1Mb RAM • 20/40Mb hard drive

Fast, comparatively lightweight portable from Bull, featuring a megabyte of RAM and choice of hard drives. Screen display reasonable.

Power ★★★

Value for money ★★★

● COMPAQ PORTABLE II

01-940 8860
From £2,395
80286 CPU • 640K RAM • 20Mb hard drive • 360K floppy

Expensive, under-specified, portable from a dealer with a reputation for high quality and matching high prices. Compaq machines are rugged, but demand fat wallets.

Power ★★★

Value for money ★★

● COMPAQ PORTABLE III

01-940 8860
From £2,995
80386 CPU • 640K RAM • 20/40Mb hard drive • 1.2Mb floppy

Mid range Compaq 386-based portable featuring a choice of drives but lacking sufficient RAM for a machine of these specifications – why cut corners? Reasonable screen display and rugged construction.

Power ★★★★

Value for money ★★

● COMPAQ PORTABLE 386

01 940 8860
From £4,695
80386 CPU • 1Mb RAM • 40/100Mb hard drive 1.2Mb floppy

Top of the range Compaq portable with an optional 100Mb hard drive for those seeking power computing with a capital P. Also featuring a 1.2Mb floppy and a full megabyte of RAM.

Power ★★★★

Value for money ★★★★

● COMTECH TECHNOLOGY 286LT

0964 615100
From £1,995
80286 CPU • 1Mb RAM • 32Mb hard drive • 1.44Mb floppy

Portable from Comtech UK with the unusual distinction of having a gas plasma rather than LCD display. Plenty of features such as high density 3.5-inch drive and 32Mb hard drive ensure the desirability of this machine.

Power ★★★★

Value for money ★★★

● EPSON PC AX

0442 61144
£2,749
80286 CPU • 640K RAM • 20Mb hard drive

Very popular and well made portable from printer manufacturer Epson. The PC AX features a paper white monitor and is light and very portable.

Power ★★★

Value for money ★★★

● EPSON FD

0442 61144
£1,199
V30 CPU • 640K RAM • Single/twin floppies

One of the cheaper Epson portables but still with a heavy price tag this machine features a fast V30 central processor and is available with a choice of floppy drives (also available in a hard drive 'HD' version).

Power ★★

Value for money ★★

➤

MEMORY UPGRADES

ONE STOP SOURCE FOR ALL PC MEMORY UPGRADES

Datrontech. Europe's only dedicated manufacturer and stockist for plug compatible memory. All products carry a five year warranty and are available ex-stock. Call for volume and dealer pricing.

1 SIMMS & SIPS

Memory module and chip level upgrades to suit all PC models. Call our unique advisory service for upgrade assistance.
AMSTRAD, AST, DELL, EPSON, EVEREX, HP, INTEL, IBM XT/ATs and CLONES, MITEC, NOVELL, OPUS, SUN, SILICON, GRAPHIC PLUS

	(£)
256K x 8 – 100	19
256K x 8 – 80	22
256K x 9 – 100	23
256K x 9 – 80	26
256K x 9 – 60	32
1M x 8 – 100	60
1M x 8 – 80	63
1M x 8 – 70	69
1M x 9 – 100	65
1M x 9 – 80	68
1M x 9 – 70	75
4M x 8 – 80	490
4M x 9 – 80	550

CALL FOR SIP PRICING

Memory board upgrades available for: ORCHID, EVEREX, TECMAR, INTEL, AST . . .
Call sales office for details.

2 CHIP UPGRADES

DRAM, SRAM, EPROM & CACHÉ memory available from stock. Call for quantity pricing and speed selections.

	(£)		(£)
64K x 1 – 120	1.05	256K x 1 – 100	1.75
64K x 1 – 100	1.15	256K x 1 – 80	2.15
64K x 4 – 100	1.85	1M x 1 – 100	6.25
64K x 4 – 80	2.15	1M x 1 – 80	6.65
256K x 1 – 120	1.55	1M x 1 – 70	6.95
		256K x 4 – 100	6.45

*Scheduled orders are price protected.
*Packaged styles include DIL and surface mount

3 CO-PROCESSORS

		(£)
D8087	5MHz	65
D8087-1	10MHz	125
D8087-2	8MHz	95
D80287-6	6MHz	98
D80287-8	8MHz	150
D80287-10	10MHz	175
A80387DX-16	16MHz	260
A80387DX-20	20MHz	295
A80387DX-25	25MHz	370
A80387DX-33	33MHz	455
N80387SX-16	16MHz	235

*Excellent trade and volume discounts available
*CMOS options also available
*Weitek Co-Processors call sales office

4 COMPAQ MEMORY

	COMPAQ P/No.	PRICE (£)
DESKPRO 386/33		
2MB Module	115144	345
DESKPRO 386/25		
1MB Module	113131	165
4MB Module	113132	490
DESKPRO 386/20		
1MB Module	113131	165
4MB Module	113132	490
DESKPRO 386/20e		
1MB Module	113131	165
4MB Module	113132	490
1MB Exp/Bd	113633	170
4MB Exp/Bd	113634	550
DESKPRO 386/5		
1MB Module	113646	165
4MB Module	112534	490
1MB Exp/Bd	113633	170
4MB Exp/Bd	113634	550
DESKPRO 386/16		
1MB Kit	108071	255
4MB Kit	108072	680
1MB Exp/Bd	108069	280
2MB Exp/Bd	108060+ 108071	Call
4MB Exp/Bd	108070	995
8MB Exp/Bd	108070+ 108072	Call
PORTABLE II		
1MB Kit	113012	94
PORTABLE III		
512KB Kit	107331	71
2MB Kit	107332	182
PORTABLE 386		
1MB Kit	107651	288
4MB Kit	107653	930
4MB Extra/Bd	107654	930
COMPAQ SLT/286		
1MB Bd	110235	278
COMPAQ LTE/286		
1MB Bd	117081-001	295
2MB Bd	117081-002	595

*Call for details on our dealer support programme.

5 IBM MEMORY

XT/AT UPGRADES	(£)
128K board for XT/AT Extended/Expansion boards	78
Orchid Boards with memory	
512K for XT/AT	265
1MB	299
2MB	345
4MB	495
8MB	790

Other configurations available. Orchid boards take standard SIMM modules. User upgradeable.

PS/2 UPGRADES

Models 30/286, 50, 50Z, 55, 60, 70 & 80

PLANAR (MOTHERBOARD) MODULES:

	IBM P/No.	(£)
PS/2 25	78X8955	34
PS/2 30/286		
512K Kit	30F5348	86
2MB Kit	30F5360	229
PS/2 50/60		
As above fitted with IBM adapator board	1497259	Call
PS/2 50Z		
2MB Module	6450604	274
512K Kit	30F5348	86
2MB Kit	30F5360	229
PS/2 5SSX		
2MB Module	6450604	274
PS/2 70 PORTABLE		
2MB Module	6450604	274
PS/2 70 E61 & 121		
1MB Module	6450603	152
2MB Module	6450604	274
PS/2 70 A21		
2MB Module	6450608	286
PS/2 80/041		
1MB Bd	6450608	193
PS/2 80-111 & 311		
2MB Bd	6450379	322

New 4MB Kit 34F2933 Available now

WAIT NO LONGER for your IBM memory – all above are EX STOCK

IBM ADAPTOR BOARDS

2–8MB Expanded memory board using IBM 2MB SIMM modules (6450604) user upgradeable.

PS/2 50, 50Z, 55Z, 55SX & 60		
2–8MB Exp Bd	1497259	449
PS/2 70 & 80		
2–8MB Exp Bd	6450605	449

EMS/LIMM 4.0 BOARDS

Extended/expanded memory boards S/W configurable, Using std SIMM modules. User upgradeable.

	(£)
512KB 16/32	295
1MB	315
2MB	360
4MB	515
8MB	820

Call for other configurations

6 TOSHIBA MEMORY

	TOSHIBA P/No	(£)
PORTABLE T1600		
2MB card	PC8-PA8302U	344
PORTABLE T3100e		
512K card	PC9-PA8340U	148
2MB card	PC9-PA8341U	344
PORTABLE T3200		
3MB card	PC6-PA7137U	485
PORTABLE T5100		
2MB card	PC7-PA8301U	344
PORTABLE T5200		
2MB Module	PC10-PA8304U	344
PORTABLE T3200 SX		
2MB card	PC12-PA8307U	344
DESKTOP T8500 SX		
2MB card	PC10-PA8304U	344

7 APPLE MEMORY

		(£)
MacINTOSH II, IIcx, IIx		
1MB Kit		98
2MB Kit		125
MacINTOSH IIci		
4MB Kit		240
Laserwriter II/NXT		
1MB Exp/Kit		145
4MB EXP/Kit		449

8 DEC MEMORY

	(£)
8MB VAX STN 3100	1,727
12MB	1,993
16MB	2,792

Call for trade pricing

9 SILICON GRAPHICS MEMORY

	(£)
8MB Model 4D/120, 220, 240, 280	1,685
4MB Model 4D/40, 50, 70 & 80	459
4MB Model 4D/20	459
16MB Model 4D/40, 50, 70, & 80	859

10 HP LASERJET UPGRADES

MEMORY

Laserjet II & II D			
1MB	£146	4MB	£399
2MB	£265		
Laserjet IIP			
1MB	£179	3MB	£355
2MB	£285	4MB	£435

New

FONT CARTRIDGES

100% HP compatable font cartridges

STANDARD CARTRIDGES:	(£)
86/A, C, D, E, G, H	49
86/B, F, J to Q, S to Y	69
86/R & Z	79

New 65-in-one CARTRIDGE 135

65 popular fonts on cartridge
*UK version includes £, Line Draw & OCR-A
*Equiv/Enhanced to HP Pro Collection

11 ATARI STE

	(£)
512K to 1MB	58
2MB	140
4MB	265

Datrontech also offer upgrades on popular Commodore, Amiga and Amstrad PCs. Call for details.

12 FIND OUT MORE

Please send me more details on the following:

1	2	3	4	5	6	7	8	9	10	11

Please tick

Name.....

Company.....

Address.....

.....

Tel. No.....

CALL 0252 313155

Board level products manufactured by Kingston Technology Inc. for whom Datrontech are exclusive U.K. agents.

Access VISA

Lowest Price Guaranteed For Memory Upgrades other than shown call sales office

DATRONTECH LTD
Datrontech House, 33 Grosvenor Road
Aldershot, Hampshire GU11 3DP
Fax: 0252 341939

MISTRAL COMPUTER SUPPLIES

Mail Order 0705 453814 Mail Order

AMIGA SOFTWARE	A	ST
F29 Retaliator	16.99	13.99
Pool of Radiance	16.99	16.99
Damocles	16.99	16.99
Untouchables	16.99	13.99
Iron Lord	19.99	19.99
Chaos Strikes Back	16.99	16.99
Dragon Spirit	13.99	13.99
Drakkhen	19.99	19.99
Fast Lane	13.99	13.99
Last Ninja II	16.99	16.99
Rainbow Island	16.99	16.99
Cabal	16.99	13.99
Barbarian II (psygnosis)	16.99	16.99
Keef the Thief	16.99	----
Ninja Warriors	13.99	13.99
Ghostbuster II	16.99	13.99
Operation Thunderbolt	16.99	13.99
Chase H.Q.	16.99	13.99
Power Drift	16.99	13.99
Ghouls & Ghosts	16.99	13.99
Stunt Car Racer	15.99	15.99
Continental Circus	16.99	16.99
Shadow of the Beast	24.99	24.99
It Came from the Desert (1 meg)	19.99	----
Kenny Dalglish II	19.99	19.99
Sim City	19.99	19.99

ST SOFTWARE	A	ST
Turbo Outrun	16.99	13.99
Interphase	15.99	15.99
Space Ace	29.99	29.99
Altered Beast	16.99	13.99
Beach Volley	16.99	13.99
Super Wonderboy	16.99	13.99
Dragon of Flame	16.99	16.99
Fiendish Freddy	19.99	19.99
Xenon II	16.99	16.99
Double Dragon II	13.99	13.99
Gazza's Soccer	16.99	16.99
P47	15.99	15.99
F16 Falcon	19.99	16.99
Falcon Mission Disk	13.99	13.99
Predator	16.99	13.99
Pin Ball Majic	16.99	13.99
Robocop	16.99	13.99
Supercars	13.99	13.99
Risk	13.99	13.99
Crossbow	13.99	13.99
TV Sport Basketball	19.99	---
Scramble Spirits	13.99	---
Manchester United	13.99	---
Infestation	16.99	---
Typhoon Thompson	16.99	---

★★★★★ AMIGA HARDWARE ★★★★★

Amiga 500 Bat Pack * SPECIAL OFFER*	Phone
A590 Hard Drive 20 M.B. *SPECIAL OFFER*	£352.99
Vortex 40 meg hard drive *SPECIAL OFFER*	£505.99
External Disk Drive For Amiga	£68.00
Amiga 500 + 1084 monitor	£607.00
A501 512K RAM exp	£72.99
A520 Modulator	£22.99
1084 Monitor	£215.99

3.5" Disks unbranded, boxed and fully guaranteed.
10 .....50p each 50 +.....45p each

Send Cheque/PO to: Mistral Computer Supplies, 42 Park Way, Havant, Hants, PO9 1HH.

New titles dispatched on day of release. Send for full soft & hardware list.
Hardware also available for ST64 and IBM. Software also available for all formats.

QL FROM £90 — PRINTERS FROM £50

E.E.C. LTD

QL BACK UP, WITH P.S.U. etc., JM ROM £90
QL BACK UP, WITH P.S.U. etc., JS ROM £100

QL COMPLETE AS NEW 2.35 SOFTWARE
JS ROM with Quill, Abacus, Archive + Easel £135
Same with JM ROM.....£120
90 days warranty on above items

See us at Stand 106 - All Formats Microfair, Horticultural Hall - April 28th/29th

★ SPECTRUMS AS NEW ★
48k+ £69.95, 128k £89.95, PLUS 2 £109.95

★ PRINTER CLEARANCE ★
★ ALPHACOM 32 with I.Face & PSU for SPECTRUM .....£49.95★
ALPHACOM PAPER 1 ROLL £3.50, 5 Roll Pack £12.95
★ SEIKOSHA GP 100A Dot Matrix 80 Col., 50 cps.....£79.95 ★
Tractor Feed, ideal for QL with Centronics Interface .....£24.95 only extra
★ STAR NL 10 Dot Matrix 120cps. NLQ 30cps 80 Col Tractor & Sheet Feed Serial Interface - supplied with Free lead for QL & Spectrum.....£140.00
(Interfaces also available for Centronics and IBM PC's)

★ COMMODORE BARGAINS ★
★ **BROTHER HR10** Letter Quality Daisywheel 2K Buffer Tractor Feed, 80 Col., 12 cps. CBM Lead free. .....£129.95 ★
★ NL 10 Dot Matrix 120 cps. NLQ 30cps 80 Col Tractor & Sheet Feed with Commodore Interface Supplied with Free Lead.....£140.00 ★

★ **MICRODRIVE EXPANSION KIT★**
Includes Microdrive, Interface 1, Booklet, Network lead, intro, cartridge and flex connector £69.95

EXTRA MICRODRIVES (New) £24.95
EXTRA MICRODRIVES (Reconditioned).....£16.95
CARTRIDGES
Singles £4.50 Wallets with 4 cartridges £19.00

INTERFACE 1 CONNECTORS AND LEADS each £3.50
PRINTER (RS232) LEADS FOR INTERFACE ONE.....£12.95
POWER SUPPLY UNITS 48k Std £8.95
POWER SUPPLY for Heavy Duty or 128K £9.95
POWER SUPPLY for QL or Commodore.....£18.95

★ Min. Orders £10.00. £6.00 Carriage - Printers and Micros. £3.00 other items P & P UK Overseas add £15.00 Printers etc. £5.00 others. Terms CWO or Visa/Access. All offers subject to availability.

Orders to EEC Ltd. Dept NCE 1, 18-21 Misbourne House, Chiltern Hill, Chalfont St Peter, Bucks SL9 9UE. Tel: 0753 888866

● NEC UK POWERMATE PORTABLE

01-924 1244
From £2,795
80286 CPU • 640K RAM • 42Mb hard drive

Superior portable from NEC featuring 640 x 480 LCD screen with backlight, three expansion slots and a CPU speed of 16MHz. Altogether a well specified, high quality computer.

Power ★★★

Value for money ★★★★

● OLIVETTI M15

0908 374900
From £1,105
80C88 CPU • 512K RAM • 20Mb hard drive

The Olivetti range of much coveted portables are well constructed, rugged and compare favourably with the price of machines from rival manufacturers. Unfortunately, this machine suffers from having only 512K of RAM which simply isn't enough for today's quality software.

Power ★★

Value for money ★★

● SCHNEIDER PORTABLE AT

0604 766572
£1,995
80286 CPU • 640K RAM • 20Mb hard drive

Recently suffering much criticism over its Euro PC, Schneider is nonetheless a manufacturer of reasonable quality, cheap computers. The Portable AT is fully specified and follows the Schneider tradition of small prices.

Power ★★★★

Value for money ★★★★

● SMT SUPER GOLF

01-785 2411
From £3,499
80286 CPU • 640K RAM • 40/100Mb hard drive

Portable or a German car? This machines shares a name *and* a level of construction hard to find elsewhere. Featuring an optional 100Mb hard drive, the Super Golf is a worthy of power user consideration.

Power ★★★★

Value for money ★★★

● TANDY 1400FD

0922 710000
£995
V20 CPU • 768K RAM • Twin floppies

A portable computer with a price tag unmatched outside the Amstrad stable, the 1400LT has a CGA-compatible LCD screen and can be plugged into a colour monitor via its built-in port.

Power ★★★

Value for money ★★★★★

● TANDY 102

0922 710000
£299
80C85 CPU • 24K RAM * Optional disk drive

The journalist's choice. Not PC compatible but very compact, very light and with good word processing software built in, this computer should be considered by those needing to prepare documents on the move. There's even a built in modem so you can transfer files while at airports, train stations, in hotel rooms etc.

Power ★★

Value for money ★★★★

● TOSHIBA TI600

0932 841600
£3,195
80C286 CPU • 1Mb RAM • 20Mb hard drive

Mid range Toshiba 286 featuring a CMOS low power CPU, hard drive and memory expandable to five megabytes. Rugged construction and good quality screen display.

Power ★★★★

Value for money ★★★

● TOSHIBA T5200

0932 841600
From £4,995
80386 CPU • 2Mb RAM • 40/100Mb hard drive

Top of the range Toshiba 386-based portable. Memory is expandable to an enormous eight megabytes, there's a 100Mb hard drive option, 2Mb RAM as standard and two expansion slots.

Power ★★★★★

Value for money ★★★★

● TOSHIBA T1000

0932 841600
£795
80C88 CPU • 512K RAM • Floppy drive

Entry-level portable PC. 512K RAM as standard expandable to 1.2 megabytes (if you can afford the DRAMs). The machine has the unusual distinction of having MS-DOS contained on ROM rather than booted from floppy.

Power ★

Value for money ★★★★

● VICTOR V286P

0494 461600
£2,499
80286 CPU •1Mb RAM • 30Mb hard drive

➤

ADVANTAGE PC SHAREWARE

- POPULAR TRIED & TESTED PROGRAMS
- FAST DESPATCH - FIRST CLASS
- EASY TO RUN AND USE

NEW!
ATARI & AMIGA OWNERS SEND FOR YOUR **FREE** PUBLIC DOMAIN SOFTWARE CATALOGUE

OUR PRICES INCLUDE VAT AND POSTAGE

5 DISCS	£13.25
4 DISCS	£11.25
3 DISCS	£9.45
2 DISCS	£6.95
1 DISC	£3.95

Over 5 Discs £2.50 each
for 3.5" Please Add £1 per Disc

CALL 0242 224340 NOW!
FAX: 0242 226755

WORDPROCESSING

- PC-WRITE The well-established multi-function WP
- PC TYPE+ Popular WP, Spell Checker, Undo, Help. 4 DISCS
- PC TYPE II Great new WP from Buttonware. 3 DISCS
- GALAXY Like WordStar with pull-down menus. 2 DISCS
- MINDREADER Clever WP anticipates what you're typing
- PC-OUTLINE Popular brain-storming ideas processor
- SPELLING CHECKER For most WP's. Can update dictionary
- THESAURUS Great when searching for alternative words
- HYPERSHELL Versatile UK hypertext program. 2 DISCS

SPREADSHEETS

- PC-CALC+ Well-known Buttonware spreadsheet. 3 DISCS
- AS-EASY-AS Popular and easy to use. 123 Compatible
- POWER SHEETS Highly rated 3D spreadsheet. 3 DISCS
- QUBECALC Easy to use 3-dimensional spreadsheet.
- GOALSEEKER Time-saving program helps create spreadsheets
- PIVOT! Prints spreadsheet in landscape or portrait mode

DATABASE MANAGERS

- PC-FILE+ V.5 popular database with mailmerge. 3 DISCS
- PC FILE-dB dBase power at shareware prices. 3 DISCS
- FILE EXPRESS Straightforward database system. 2 DISCS
- WAMPUM Implements dBase III language-hard disc. 2 DISCS
- DREAM Extensive relational database. 3 DISCS

PRINTING

- PRINTER TOOLBOX Sideways printing, Spooler, Print Control, Word Counter, Indexer, Text Analyser and more.
- PRINTSHOP features DIY Business Cards, Car Window Posters, Letterhead Maker, Cassette and disc labellers.
- LQ Set of new fonts to enhance your printed text.
- SIGNSMITH Create your posters, leaflets and letterheads.
- BRADFORD Typesetting quality on a dot-matrix printer.
- TYPEWRITER EMULATOR For quick messages, envelopes etc.

HOME & BUSINESS

- FREEWAY CASHBOOK UK account and budget. 3 DISCS
- NOYES CASHBOOK New UK cash analyser. 999 headings.
- FAST BUCKS Full feature account and budget. 2 DISCS
- HOME INVENTORY/HOME INSURANCE Log your possessions and estimate their value for insurance purposes.
- FREEWAY ACCOUNTS PLUS Popular UK Package with Sales, Purchase & Nominal Ledgers. 3 DISCS
- BUSINESS GRAPHICS Line, paragraphs, Piecharts, 2 DISCS.
- 100 STANDARD BUSINESS LETTERS to use and adapt
- EZ-FORMS standard business forms to use and adapt
- LABEL MAKER Simple mailing label database and printing
- PRO-COMM PLUS UK The definitive communications program.
- EAZI-LINK Supports Prestel and ViewData comms. 2 DISCS
- STD CODES in numerical order with corresp. exchanges.

CUSTOM DATABASES

- MUSIC MAESTRO Catalogue and sort your LP's & CD's.
- BOOK MINDER Catalogue and sort your book collection.
- PHOTOGRAPHER Catalogue printing, processing, archives.
- HOME VIDEO Catalogue and sort your videos. 2 DISCS.
- GENE GENIE Plot your family tree. 2 DISCS. UK
- MATCHMAKER Now you can start your own dating agency!
- TIMETABLE Class/Staff timetabling for schools. 2 DISCS.
- RE-MEMBER Easy to use database designed for clubs. UK.

INFORMATION SYSTEMS

- MOVIE DATABASE Over 3000 films & videos. 2 DISCS.
- GIFT IDEAS GENERATOR For birthdays & Christmas.
- MICRO COOK Recipes organiser - with many included.
- BARTENDER Learn how to mix those exotic cocktails.
- NIGHTSKY Definitive computer planetarium UK. 2 DISCS.
- HOROSCOPE Prints horoscope and astrological data.
- ASTROL-95 Astrological charts & horoscopes. 2 DISCS.
- BIORHYTHM MONTHLY Plot your bioryhthms and compare.
- SPEED READING Practical Course with exercises

LIFESTYLE

- WEIGHTWATCHER Control calories and lose weight.
- HAVING A BABY Plus useful baby name selector program.
- LIFESTYLE COMPENDIUM Personality assessment. Personal Success, Self Analysis, Life Expectancy, Smoking.
- PC-SPORT Quickly generate your own league tables.
- PUNTERS PAL Aims to improve your betting odds.
- DANCE TUTOR Teach yourself Disco dancing.

PROJECTS & PASTIMES

- PC JOKES Hotboot, Insults, Drain, Locust, Hotlot Alien Name Generator, BackTalk, Buzzword Generator
- PC JOKES II April Fool, Deceive, Busy, Soap Opera Plot Generator, Headline Generator, Jive Talk, Madlib
- PAPER AEROPLANES Loads of designs ready to print out
- ORIGAMI Study the oriental art of paper folding
- POET'S CORNER Produce computer-created poems. 2 DISCS
- GREETINGWARE Create your own on-screen Greetings Cards.
- KNIT-WIT Create a picture on the screen and this will generate your knitting pattern for you. UK.

EARLY LEARNING (AGE 3-12)

- AMANDA'S LETTER LOTTO Keyboard and letter skills
- ABC FUNKEYS Entertaining way to learn the alphabet
- AMY'S FIRST PRIMER Basic arithmetic and letters
- CHILDREN'S EDUCATION Teaching while at play:- Alphabet, Animals, Clockgame, Hangman and Mosaic
- NIFTY NUMBERS A good way to learn basic numeracy
- WHACKY WORDS A good way to learn words and spelling
- ANDY'S WORD GAMES Play Opposites, Synonyms, Word Find Odd man out, Categories, Comparisons, Plurals.

EDUCATION FOR CHILDREN & ADULTS (AGE 5 UP)

- EXPLORING WORDS Hangman, Spelling, WP, Letterfall
- EXPLORING MATHS Funnels & Buckets, Algebra, Prime
- EXPLORING TIME Telling, Speaking, World Timezones
- EXPLORING SCIENCES Physicalc, Equator, Planets
- EXPLORING YOUR IQ Brain-boggling tests and puzzles
- EXPLORING ELECTRONICS From Ohm's Law to Amplifiers
- EXPLORING GEOGRAPHY Gazetteer, 3D-World, Weather
- EXPLORING MUSIC Player Piano, Composer, Polyphony
- EXPLORING GRAPHICS Animator, Etch-A-Sketch, 3DStar
- EXPLORING COMPUTERS Beginners guide to computers
- Learning a foreign language? Then try this selection of tutorials - each title on its own disc:-

★ FRENCH ★ SPANISH ★ ITALIAN ★ GERMAN ★ HEBREW
★ CANTONESE ★ SPANISH FOR TRAVELLERS
★ FRENCH VERBS ★ SPANISH VERBS ★ JAPANESE
★ FRENCH HANGMAN

MATHS & SCIENCES

- WIZ QUIZ Teaches maths in an entertaining way.
- MATHS TUTOR Arithmetic through to higher maths.
- STATISTICS Data manipulation & analysis. 3 DISCS.
- PROBABILITY & STATISTICS curve-fit & simulation.
- MATHS LAB Linear Algebra & Matrix Theory. 2 DISCS.
- X-Y SEE Teach & test maths using graphics. 2 DISCS.
- ELECTRONICS Multi-tool package for engineers.
- PHYSICS GCSE REVISION A novel aid to study. UK.
- COMPUTER SCIENCE GCSE REVISION Study aid UK.
- MOLECULE BUILDER Graphics of molecules. 2 DISCS.

UTILITIES UNLIMITED

- ESSENTIAL UTILITIES Over 50 of the best utilities
- ADVANCED UTILITIES A more specialised collection
- DISK COMMANDO Professional package similar to Norton Utilities at Shareware prices. 2 DISCS
- PROFESSIONAL MASTERKEY Powerful disc/file editor
- PACKDISC Economise space and speed up your hard disc.
- FLEXIBAK A fast, easy to use hard disc backup program.
- FLU-SHOT+ Helps you deal with and avoid PC viruses.

GRAPHIC DESIGN

- DANCAD Accurate 3D frame drawing & animation. 2 DISCS
- IMAGE-3D create effective 3D drawings on CGA or EGA
- PC-KEY-DRAW The very popular Desk Top Publisher and scaled drawing package. 3 DISCS
- PC-KEY-DRAW LIBRARY Picture & Font Library Utilities
- FINGERPAINT Painting program runs on MSDOS not GEM
- CHARTS UNLIMITED graphics & text processor.
- FLO-DRAW Flow diagram text & graphics editor. 2 DISCS
- GRAPHIC ANIMATOR Create animated picture sequences.
- PC DRAFT 2 like PC Paint. 2 DISCS

BOARD & CARD GAMES

- PC-OPOLY PC version of the well-known board game
- SCRABBLE Good implementation - updateable dictionary
- WORLD DOMINATION The classic game of Risk and strategy
- SLEUTH Exciting murder msytery solving game
- CHESS & CHECKERS Quality graphics versions of games
- TWO BRIDGES Two versions of the famous card game.
- GAMBLER'S DEN Craps, 21, Poker and Pontoon
- CARD SCHOOL Canasta, Gin Rummy, Heart and Lowball
- PATIENCE APLENTY Three different games of Patience.
- PUB GAMES features Dominoes and Cribbage

SIMULATIONS

- FORD SIMULATOR Test drive a selection of Ford cars. 2 DISKS
- SOCCER GAME Manage your own soccer team to Div. 1. UK
- BASSTOUR Absorbing fishing simulation for EGA.
- PC-PRO GOLF High resolution golf. 2 DISCS.
- MEGALOPOLY Speculate and be a big business tycoon
- WAR GAME Strategy game based on war games rules.

ADULT ENTERTAINMENT

- ADULT PURSUITS Rather naughty Adult Trivia & Strip Poker
- EXPLOITS IN FANTASYLAND! An amusing and saucy romp. UK
- PIN-UPS Selection of pin-up pictures to view or print
- LES GIRLES More naughty pictures to view or print.
- ADULT HUMOUR Large collection of rather rude jokes
- ADULT ADVENTURES Bad-Bad, Drive-In and Fifi
- ADULT GAMES features rude Space Invaders & Sexware

ARCADE GAMES

- STAR TREK puts you in command of the Enterprise.
- POPCORN featuring superb graphics and fast action.
- DRACULA IN LONDON role-playing game based on novel.
- WANDERER based on Boulderdash theme. For CGA or Herc.
- TANK BATTLES Graphic action for two players.
- CAPTAIN COMIC High quality animated graphics.
- SNARF multi-level treasure-hunt game for EGA.
- PINBALL WIZARD Five fast action pinball machines.

ADVENTURES

- COLOSSAL CAVE ADVENTURE The one that started it all.
- DUNGEONS & DRAGONS Fascinating and complex adventure.
- GOLDEN WOMBAT OF DESTINY British Infocom-style game.
- JACARANDA JIM Escape from the planet Ibberspleen IV.
- KINGDOM OF KROZ - voted best game in Shareware.
- RETURN TO KROZ - The sequel - even more challenging.

JOIN THE INDEPENDENT COMPUTER USER GROUP
GET YOUR SHAREWARE
FOR JUST £2 A DISC (3.5" £3)

★ OBTAIN DISCOUNTS ON COMMERCIAL SOFTWARE
★ RECEIVE A REGULAR MONTHLY NEWSLETTER.
★ USE OUR TECHNICAL SUPPORT SERVICES.
All this for just £15 a year (EC Countries)
£18 (Non-EC Countries)

GAME COMPENDIUMS

- CLASSIC GAMES Space Invaders, Pacman, Pacgirl, Ribit, Bricks, Donkey Kong, Q-Bert, Jumping Joe
- FUN AND GAMES Pango, Bouncing Babies, Elevator, Centipede, Pyramid, Dragons, Pac, Osbit
- MAZING GAMES Treasure Hunt, Amaze, Polymaze, Castle, 3-Demon, Fire, Chase
- LOST VEGAS One Arm Bandit, Roulette, Backgammon, Biorhythm, Keno and Casino featuring 4 more games
- SKILL & STRATEGY Frigate (Ships) Big Rig (Trucking simulation), Stock Exchange Game, Air Traffic Control
- COME IN PEACE Striker, Paratrooper, Round 42, Sopwith, Dragonfly, Landmine
- STAR WARRIORS Emergency Mission, Quantoid, Kamakaze, Rescue, Rockets, Spacewar
- PC CHALLENGE PC-Chess, Othello, Entrap, Hexplode, Kalah
- JUNIOR CHALLENGE 3D TicTacTo, Dotto, Draughts, Mastermind, Brainstorm, Gomoku and Four-In-A-Row
- MONOGAMES 18 games for Mono/Hercules PC's. 2 DISCS
- KEEP THEM AMUSED Burger Blaster, Grime, Racer, Ninja, Caverns, Galaxy
- WIT YOUR PITS Battleships, Five-In-A-Line, Stock Game, Sales Game, Rogue (Artificial Intelligence), Eliza
- FACE THE ACTION Batalia (2 player) Tank (1/2 Player), Moonbase, Blort II, Gemini (can play 2-computer game)
- BLOCK & TACKLE Nemon, Qix, Xonix, Blockade, Ski-ing, Mummies, Lazer, Beast, Tron
- BASIC AMUSEMENTS Over 60 games to amuse and teach (2 DISCS)
- SPY CATCHER Master Spy, Raid Over Auschwitz, Hostages, Brimstone, Mad Scientist (Mad Scientist is for BASIC2)
- GOOD SPORTS PCTennis, Teed Off (Golf) Sailing (in the Bermuda Triangle), Armchair Quarterback (Football)
- SEEK & DESTROY Galactic Conquest, Daleks, Depthcharge, Lazy Monday, Intercept, Berzerk
- SPACED OUT Saucer, Crisis, Encounter, Xo and Space
- UP AND AT 'EM Flightmare, BitBat, Droids, Robotron, Spyder, Eggs, Stun
- PLAYTIME Lotto, Bingo, The Story of Eli, Motoman, Slug
- SPORTING LIFE PC-Golf, PC-Pool, PC-Bowl, Basketball
- ARCADIA Killer Bees, Mario Brothers, Snipe, Snakepit, Pearl, Wimps, RLogic
- WILLY AND HIS FRIENDS Willy the Worm, Willy II, Willy Screen Designer, Doctor Sleep, Disk Crash, Labbits & Voldrons

ADVANTAGE (NCE) 56 BATH ROAD, CHELTENHAM, GL53 7HJ. TEL: 0242 224340

VISA

Fully featured portable from rising star Victor with a gas plasma display.

Power ★★★

Value for money ★★★★

● ZENITH SUPERSPORT 286

0628 668588
From £2,665
80C286 CPU • 1Mb RAM • 20/40Mb hard drive

Quality portable from Zenith featuring novel 'under the screen' drive arrangement providing easy access to floppy.

Power ★★★★

Value for money ★★★★

● ZENITH TURBOSPORT 386

0628 668588
£3,320
80386 CPU • 1Mb RAM • 40Mb hard drive • 1.4Mb floppy

Top of the range Zenith 386-based portable featuring a novel battery management system to conserve power.

Power ★★★★

Value for money ★★★

MODEMS

The last two or three years has seen a massive up-surge in the use of computer communications due to a relaxation of British Telecom controls and advances in technology.

● AMSTRAD 2400 (INTERNAL)

0279 454555
£199
V21 V22 V23 V22bis

Amstrad modems are held in high esteem throughout the industry for being cheap yet fully specified and reliable. The 2400 internal modem is no exception offering a large range of speeds at an amazing price. Fully recommended.

Power ★★★★★

Value for money ★★★★★

● AMSTRAD 2400 (EXTERNAL)

0279 454555
£249
V21 V22 V23 V22bis

As above but in a fitted case for use with any RS232 bearing computer. Again, fully specified and incredibly cheap. Recommended.
Power ★★★★★

Value for money ★★★★★

● MIRACOM WS2000

0473 233888
£108
V21 V23

Entry-level modem which has enjoyed a high level of popularity amongst those wishing to try computer communications without a large investment. The WS2000 is a manual so you'll have to twiddle the knobs to get anything from it, but it's reliable and very cheap.

Power ★★

Value for money ★★★

● MIRACOM WS3000

0473 233888
£395
V21 V22 V23 V22bis

High end Miracom modem popular amongst corporate users featuring the fast 2400/2400 full duplex mode, full Hayes compatibility and a full compliment of indicator LEDs.

Power ★★★★

Value for money ★★★

● MIRACOM WS4000

0473 233888
From £159
V21 V23 (optional)V22

Upgraded, full automatic version of the very popular WS2000 modem. the '4000 features full Hayes compatibility, LED indicators and complete software control.

Power ★★★

NEXT WEEK THE SHOPPING EXPRESS BUYER'S GUIDE TO

ST ESSENTIALS

MAIN MEDIA

BRANDED 3.5" DISKS		BRANDED 5.25" DISKS	
3M	£12.50	3M	£7.50
SONY	PER BOX	VERBATIM	PER BOX
VERBATIM	OF 10	TDK	OF 10

BULK 3.5" DISKS FULLY GUARANTEED
3.5" DS/DD 135tpi (Sony/Verbatim)

20	£17.25
50	£34.00
100	£67.00
200	£132.00

Includes labels

BULK 5.25" DISKS FULLY GUARANTEED
5.25" DS/DD 48tpi (BASF)

25	£7.25
50	£14.00
100	£27.00
200	£52.00

Includes envelopes, labels and tabs

BOXES WITH DISKS

50 x 5.25" hinged lid lockable box with 25 DS/DD disks @ £12.00
100 x 5.25" hinged lid lockable box with 50 DS/DD disks @ £20.50
40/50 x 3.5" hinged lid lockable box with 20 DS/DD disks @ £2.0.50
80/100 x 3.5" hinged lid lockable box with 50 DS/DD disks @ £40.00

All prices include VAT , but please add £2.50 postage and packing.

MAIN MEDIA, DEPT NCE
FREEPOST, ANDOVER
HANTS SP10 3BR
(0264) 333830 24 HOUR HOTLINE

VISA

COMPUTER AUCTION

Saturday 24th March at Bowlers, Longbridge Rd, Trafford Park, Manchester. Sale starts 11.00 am, viewing and testing from 8.30 am.

About 1000 lots of computer equipment including: IBM, Compaq, Amstrad, Toshiba, Apricot, Epson and other IBM compatibles.
Apple and IBM software, printers, hard disks, modems, monitors, consumables etc.

For your catalogue ring:
Computer Connections on:
025481 3316.

P.S. Ring should you have any immediate computer requirements.

Ladbroke Computing International

ST World 'Best Dealer' 1989

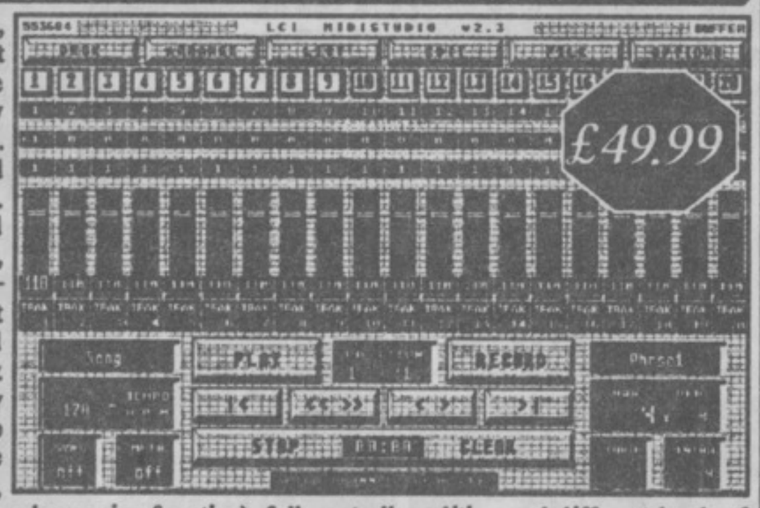
Amiga

33 Ormskirk Rd, Preston, Lancs, PR1 2QP
Open Mon. to Sat. 9:00 am to 5.00pm
Dealer enquiries welcome.

Phone us for best prices. We will try to match any price.

We were voted Best Dealer by the readers of ST World because we give our customers the best available service from, both our shop premises at 33 Ormskirk road and through our Mail order department at the same address. FOR THE BEST SERVICE AND PRICES, SHOP WITH US. All Software and Hardware is fully tested prior to purchase. All hardware is supported by on site engineers so that quick turn around on all repairs is guaranteed. There are no hidden extras. All prices include VAT. Delivery is free on orders over £100, in Mainland UK (add £5 for courier delivery). All prices are correct at time of going to press and are subject to change without prior notice. Phone for up to date prices and advice, we are always happy to help.

Midistudio 20 track ST Midi sequencer



Midistudio is an attractively priced, 20 track Midi Sequencing package. It can record up to 682 bars per phrase (pattern) on up to 100 phrases. Any phrase can be placed on any track. Tracks can be soloed and muted and tracks and phrases can be named. Program numbers can be displayed in a variety of ways including 0-127, 1-128, in banks from a11-b88 or a01-b64. The Desk features sliders to set relative volumes on each track and you can even do a mix on the fly. Midistudio also has a clock to display the length of the last playback. Step time note edit functions are available including copy, split, merge, append, transpose, velocity editing (including a humanize function), full controller editing and different levels of quantizing. Midistudio works in medium and hi res and a demonstration disk is available for just £3.99.

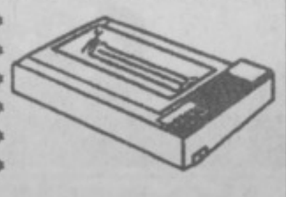
Midistudio Master. 30+ new features £129.99

IMG scanner Scan at up to 1000 Dpi

The IMG scanner is a realistic, low cost scanner which can offer high quality graphics digitising for a tenth of the cost of other scanners. This simple unit plugs into the cartridge port of the ST and accepts scanned information via optical cables which fix easily to the head of any Epson compatible dot matrix printer. The software allows grey scales to be replaced with colours, 4 in medium resolution and 16 in low resolution and offers scanning resolutions of 75, 150, 216, 300, 360 and 1000 dots per inch horizontally. Best results are achieved with photocopies. Greater than screen resolution images are saved in IMG file format and can be edited with any compatible art package. Screen resolution images can be saved in Raw data, Degas or Neochrome formats and edited with compatible art packages.

Low resolution demonstration disk £3.99

Best Selling Printers



Star LC-10.	140/36cps	£ 159.99 *
Star LC-10 Mk II.	180/45cps	£ 189.99 *
Star LC-10 Colour.	7 colour	£ 199.99 *
Citizen 120D.	120cps	£ 134.99 *
Star LC-24/10.	170/57cps	£ 239.99 *
Citizen Swift.	192/64cps	£ 319.99 *

Star Professional Series Printers

Star FR-10.	9 pin, 300cps draft, 76cps NLQ.	£ 527.99 *
Star FR-15.	15" carraiage version.	£ 688.99 *
Star XB-24/10.	24 pin, 80 cps SLQ, LQ.	£ 688.99 *
Star XB-24/15.	15" carriage version.	£ 907.99 *
Colour upgrade for Star XB & FR range.		£ 39.99 *
Star Laser Printer 8, 1 Mb RAM.		£ 1599.99 *
Star Laser Printer 8DB, Double bin version.		£ 2399.99 *
Atari SLM804 Laser with 90 days on site warranty.		£ 1129.99

* All these printers carry a 12 months on site maintenance warranty and come complete with Centronics cable. On site warranty UK mainland only. All printers are top quality products for the UK.

ST & Amiga Disk Drives

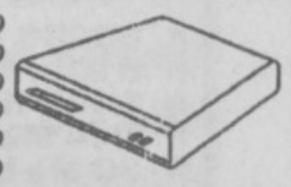
Cumana 3.5" CAS 354.	(ST)	£89.99
Ladbroke's 3.5" 1Mb	(ST)	£69.99
Cumana 1Mb, internal.	(ST)	£74.99
Please note, ST's case requires modification for this internal drive.		
A/B boot switch, fitted.	(ST)	£24.99
Cumana 3.5" CAX 354, disable switch etc.	(Amiga)	£74.99
Ladbrokes 3.5", 1Mb, disable switch etc.	(Amiga)	£64.99

Monitors & Peripherals

Atari SM124 Mono	£109.99 *	Joysticks from	£ 4.99
Atari SC1224 Colour	£279.99 *	Portfolio add-on's from	£ 39.99
Philips 8833 Colour	£249.99 *	Trak ball (ST / Amiga)	£ 19.99
Philips 8802 Colour	£239.99 *	Mouse mats from	£ 5.99
Philips 15" FST, remote, Scart input, Tv with 60 tuner presets, timer and teletext.	£259.99	Mouse/joystick extension	£ 5.99
		Amiga modulator	£ 19.99
		Hawk scanner	£ 1249.99

* Deduct £10 if bought with computer, Scart cable included

ST & Amiga Hard Drives



Megafile 30	(ST)	£399 .99
Megafile 60	(ST)	£599 .99
Supra 30Mb	(ST)	£474 .99
Third Coast 65Mb	(ST)	£599 .99
Third Coast 65Mb	(Amiga)	£659 .99
Vortex 40Mb	(Amiga)	£499 .99

Ladbroke Computing Hard drives

We have a range of high quality ST hard drives at affordable prices. All have a minimum specification of: full metal case with push button on/off switch mounted on front and 60 watt PSU, Autopark mechanism, has room, power connections and controller capability for second mechanism, external push button DMA device No. selection. The low power controller is full SCSI and can support up to 8 drives. The software includes Autoboot, up to 14 partitions on ST, 100% AHDI 3.2 compatible driver.

40HD	42Mb formatted, 11Ms, 64K on board cache.	£ 574.99
50HD	48Mb formatted, 30Ms average access time.	£ 499.99
55HD	54Mb formatted, 11Ms average access time.	£ 599.99
85HD	83Mb formatted, 28Ms average access time.	£ 699.99

Repair Centre & Upgrades Ex - stock

512K STFM RAM Upgrade fitted.	£ 74.99 *	512K STFM RAM upgrade, kit.	£ 49.99 *
512K STM RAM Upgrade, fitted.	£ 74.99 *	512K STE SIMM's, SIP's	£ 74.99 *
512K populated ST board, fitted.	£ 109.99	512K populated ST board, kit.	£ 99.99
2Mb populated ST board, fitted	£ 249.99 *	2Mb populated ST board, kit	£ 199.99 *
2Mb unpopulated ST board, fitted.	£ 59.99 *	2Mb STE SIMM's, SIP's	£ 249.99 *
STFM Blitter chip,fitted	£ 39.99 *	STFM Blitter chip, kit	£ 49.99 *
512K unpopulated Amiga board	£ 19.99	512K populated Amiga board	£ 59.99
512K unpopulated Amiga board+clock	£ 29.99	512K populated Amiga board+clock	£ 69.99

* Please check configuration before ordering. Our Atari trained engineers can repair all hardware, including Amigas, in minimum time at competetive prices. Fitting prices quoted for machines not previously tampered with. All upgrades and repairs carry our 3 months parts and labour guarantee.

Networking & Mac Emulation

- Network up to 32 ST's.
- Up to 500 Ft between ST's.
- 31K Baud data transfer rate.
- Full data correction.
- File locking.
- Networking permissions.
- Allows upto 12 hard/RAM disk partitions.
- Turn your ST into a Mac Plus.
- Reads and writes to Mac disks.
- Supports 99% of all packages.
- Supports Hard drive and second floppy drive.
- Compatible with STE.
- 30% bigger screen area than Mac Plus.
- 128K ROM's in stock.

SGSnet Starter kit £ 149.95
SGSnet add-on kit £ 99.95
Spectre GCR £ 284.99
With 128K ROM's £ 384.99

Entertainment packs

520 STE Explorer	£279.99
520 STE Power pack	£369.99
1040 STE Hyper pack	£459.99
520 STE upgraded to 1Mb	£349.99
Amiga Batman pack	£369.99
Amiga Batman + pack	£399.99

Phone for 520 and 1040STFM's

Power pack consists of Organiser software, First Basic, First music and games including, Afterburner, R-Type, Gauntlet II, Super hangon, Space harrier, Mousetrap, Buggy boy, Super huey, Eliminator, Nebulus, Pacmania, Predator, Bombjack, Bombuzal, Xenon, Double dragon, Blacklamp, Outrun, Stargoose, Starray.

Hyper pack includes Hyper Paint art package, Hyper draw vector drawing package, Borodino strategy game and Metacomco Basic.

Batman + pack includes A500 Batman pack, mouse mat, joystick and the Tenstar games pack with Photon paint.

Quality 3.5" Disks

Quantity	Unbranded Loose	Unbranded Boxed	Sony Branded Boxed
10	£6.99	£7.99	£9.99
100	£64.99	£74.99	£89.99

All disks are Sony, Maxcell or Kao and carry an unconditional lifetime guarantee. Please add 60p P&P for each pack of ten disks.

Connectors & Dustcovers

ST Centronics lead	£14.99	Monitor covers from	£4.99
Atari Monitor lead	£5.99	LC-10 printer cover	£7.99
Pair of Midi leads	£7.99	Hard drive cover	£4.99
Amiga Scart with sound	£14.99	ST cover	£3.99
Null Modem cable	£10.99	Amiga A500 cover	£3.99
8 bit Printer interface	£29.99	Mega 2 cover	£7.99
Atari DMA cable	£15.99	Disk drive cover	£2.99

Disk boxes from £4.99. Phone for care kits.

Business & DTP Systems

Mega ST1 + SM124	£	599.99
2Mb upgraded 520STE	£	499.99
4Mb upgraded 520STE	£	699.99
Portfolio (pocket PC)	£	224.99
Atari PC4 (80286)	£	1349.99
Atari PC5 (80386)	£	2069.99
DTP Mega 2 pack	£	1674.99
DTP Mega 4 pack	£	1999.99
A4 Flat bed scanner	£	449.99

This high quality 200dpi flat bed scanner is also a thermal printer and photocopier. It can scan high resolution images in up to 16 grey scales. Software runs on Amiga and ST (ST software includes editor) and requires 1Mb of memory. This is probably the most cost effective piece of office equipment you could own. Centronics cable included.

VISA ACCESS

(0772) 203166 Fax 561071

Ladbroke Computing International is a trading name of Walton Marketing Limited. Copy date 21/02/90

To assist us in processing your order please quote this code: SST3.2

BEST PRICES!

"Well done" "Amazing prices" "Very quick delivery" - Mr T.N-S. Bucks

ATARI PC4
286 AT

- ★ 80286 AT Compatible
- ★ 12 Mhz Clockspeed
- ★ 1 Mb RAM (expandable 8Mb)
- ★ 1.2 Mb 5.25" floppy disk
- ★ 60 Mb hard disk - 28 ms
- ★ VGA (on motherboard)
- ★ VGA 14" Colour Monitor
- ★ Supplied formatted, partioned and installed with MS DOS
- ★ Supplied with Windows 286
- ★ Extra drive (1.44MB 3.5") - £80 + vat
- ★ 12 Months On Site Maintenance

(8 hr call out by the OFFICIAL Atari maintenance company)

**** Phone Now For More Details ****

£1415.00

excluding vat (£1627.25 inc vat)
including courier delivery

ATARI ABC
286 AT

- ★ 80286 AT Compatible
- ★ 8 Mhz Clockspeed
- ★ 640K RAM (expandable 1Mb)
- ★ 1.44 Mb 3.5" floppy disk
- ★ 30 Mb hard disk
- ★ EGA, CGA, MDA & Hercules
- ★ Atari PCM1415 EGA 14" Colour Monitor
- ★ Supplied formatted, partioned and installed with MS DOS
- ★ AT Keyboard
- ★ 3 AT & 3 XT expansion slots
- ★ 12 Months On Site Maintenance

(8 hr call out by the OFFICIAL Atari maintenance company)

**** Phone Now For More Details ****

£999.99

excluding vat (£1149.99 inc vat)
including courier delivery

HIGH DENSITY BLANK DISKS

We sell KAO unbranded high density (1.44Mb formatted) disks which are supplied with labels and guaranteed. All prices include VAT and delivery.

Quantity x 10	£15.50
Quantity x 20	£28.50
Quantity x 30	£39.99
Quantity x 50	£62.00
Quantity x 100	£117.00

WE PART EXCHANGE PC SYSTEMS, ATARI ST ETC

CALL NOW FOR PRICES!

Panasonic KXP1124

- * 80 col,24 pin multi mode printer
- * 160 cps, 53 cps NLQ at 10cpi
- * 192 cps, 63 cps NLQ at 12cpi
- * Adjustable push/pull tractors
- * Front,rear and bottom feed
- * 10, 12, 15, 17, 20cpi + proportional
- * Front panel selection - no dips!
- * 2 draft, 5 NLQ fonts standard
- * Paper Parking
- * A4 Landscape and Portrait
- * Epson LQ and IBM Pro compatible

£259.00

with 12 Months On Site Warranty
FREE ! and VAT and Delivery

MANNESMANN TALLY

MANNESMANN TALLY MT81 PRINTER

- ★ 9 Pin Dot Matrix
- ★ Parallel I/face
- ★ 155 cps high speed
- ★ 130 cps draft
- ★ 26 cps NLQ
- ★ Epson/IBM compatible
- ★ Tractor feed
- ★ Single sheet feeder
- ★ Paper Parking
- ★ Includes cable

★ 1 YEAR ON SITE WARRANTY FREE ★

£144.95

INC VAT AND DELIVERY

REPLACEMENT MT81 RIBBONS £3.95 EACH INC

CITIZEN Swift 24

- ★ 24 Pin Printer
- ★ 192 cps draft
- ★ 64 cps LQ
- ★ Epson LQ compatible
- ★ IBM compatible
- ★ Nec P6+ character set
- ★ 5 resident LQ fonts
- ★ 80 column
- ★ Tractor feed
- ★ Single sheet feed
- ★ Parallel interface
- ★ Supplied with lead
- ★ 7 Colour option available extra
- ★ Beats LC24/10 !!
- ★ RRP £447.35

★ 1 Year On Site Warranty FREE ★

£314.95

INC VAT AND DELIVERY

Swift 24 Colour Kit - only £34.95 inc

PC MODEM CARD

AKHTER MDM2400 MODEM CARD
(Identical to Amstrad 2400 Modem card!!)

- * V21, V22, V22bis & V23
- * Auto Answer / Auto Dial
- * Pulse or Tone Dialing
- * Hayes Compatible
- * Automatic mode selection
- * Mirror II Comms s/ware
- * Call progress monitor
- * Plug straight into PC
- * Full instructions
- * Standard BT connector
- * BABT Approved
- * RRP £228.85 inc vat

£134.95

including VAT and delivery

COMMODORE

The new Commodore PC Starter Pack is aimed at both the inexperienced and the experienced PC user. Containing everything the PC user needs and wants the Starter Pack includes, in a stunning eye catching box :

- ★ CPU and AT style keyboard
- ★ MS Dos & Tutor
- ★ Typing Tutor
- ★ Integrated :- Wordprocessor, Database, Spreadsheet
- ★ Monitor
- ★ GW Basic
- ★ A-Z of Computer Jargon
- ★ Tutorial Video
- ★ 90 Day Software Hotline
- ★ 12 Months On Site Warranty

The Commodore PC10 & PC20 Technical Specification :

- ★ 8088 8/16 Bit CPU
- ★ 4.77 7.16 9.54 Mhz (switchable)
- ★ 3 Expansion slots
- ★ 360K 5.25" Disk Drive
- ★ RS232 Serial Port
- ★ Mouse Port
- ★ Commodore 1352 Mouse (£29.99 + vat) available extra
- ★ 8087 (optional)
- ★ 640K Ram (expandable)
- ★ Clock/Calender
- ★ 20Mb Hard Disk (PC20 only)
- ★ Parallel/Centronics Port
- ★ AT Keyboard

The Commodore PC10 & PC20 Prices :

	MONO	CGA COLOUR	VGA MONO	VGA COLOUR
PC10 SD (Single Disk)	*520.00*	*660.00*	*680.00*	*770.00*
PC10 DD (Dual Disk)	*565.00*	*710.00*	*730.00*	*820.00*
PC20 HD (20Mb H Disk)	*730.00*	*865.00*	*910.00*	*999.00*

All Commodore PC10 & PC20 prices exclude VAT and delivery
Please add £15 + VAT for COURIER DELIVERY

SOFTWARE

TIMEWORKS DTP - Atari ST	69.99
FIRST WORD PLUS - Atari ST	56.99
PROTEXT V4.2 - Atari ST	69.99
VIDI ST - Atari ST	86.99
DEGAS ELITE - Atari ST	19.95
METACOMCO BASIC - Atari ST	9.99
DATA MANAGER PRO - ST	29.99
DELUXE PAINT 3 - Amiga	59.95
PHOTON PAINT 2 - Amiga	39.95
MUSIC X - Amiga	172.95
VIDI AMIGA - Amiga	99.99
DATA MANAGER PRO - PC	51.50
WORDSTAR EXPRESS - PC	92.00
SUPERCALC 3.21 - PC	92.00
INFOMASTER - PC	66.70

PC MOUSE

The DEXXA PC MOUSE comes with :

- ★ 9 pin connector
- ★ 9 to 25 pin adaptor
- ★ Mouse Mat
- ★ Mouse Driver Software
- ★ Dexxa Menu Software
- ★ Preprogrammed Pop Up Menus
- ★ Users Manual
- ★ Dexxa Paint It Graphics Software

100 % Microsoft Compatible

For use with IBM PC XT, AT PS/2 or compatibles

only **£37.50 + vat** *(£43.13 inc)*

BEST PRICES!

"I have never dealt with a better mail order company!" - Mr K.N. Leeds

BLANK DISKS

All of our 3.5" blank disks are KAO unbranded, grey colour, guaranteed double sided, double density & are all supplied with labels.

	3.5"	5.25"
Quantity x 10	£6.85	£3.28
Quantity x 20	£12.99	£6.34
Quantity x 30	£18.99	£9.38
Quantity x 50	£29.99	£14.95
Quantity x 100	£56.99	£27.95

CITIZEN Swift 24

- ★ 24 Pin Printer
- ★ 192 cps draft
- ★ 64 cps LQ
- ★ Epson LQ compatible
- ★ IBM compatible
- ★ Nec P6+ character set
- ★ 5 resident LQ fonts
- ★ 80 column
- ★ Tractor feed
- ★ Single sheet feed
- ★ Parallel interface
- ★ Supplied with lead
- ★ 7 Colour option available extra
- ★ Beats LC24/10 !!
- ★ RRP £447.35

★ 1 Year On Site Warranty FREE ★

£314.95

INC VAT AND DELIVERY

Swift 24 Colour Kit - only £34.95 inc

WE PART EXCHANGE PC SYSTEMS, ATARI ST, PRINTERS, MONITORS

CALL NOW FOR PRICES!

ATARI PORTFOLIO PC

Portfolio Pocket PC	£229.95
Smart Parallel Interface	£38.95
Smart Parallel Interface - with parallel cable	£41.95
32K Memory Card	£46.95
64K Memory Card	£81.95
128K Memory Card	£118.95
Finance Software Card NEW	£47.50
PC Application Software NEW	£47.50
Utilities Software Card NEW	£47.50
Serial RS-232 Interface	£56.95
Super Memory Expander - (expands to 640K)	£164.95
Portfolio Card Drive	£64.95

ST MIDI

LATEST and ORIGINAL versions !!

- C-Lab Creator SL
- C-Lab Notator SL
- C-Lab Unitor
- Steinberg Cubase V1.5
- Steinberg Soundworks
- Steinberg Synthworks
- Digital Muse Virtuoso
- Dr.T KCS 1.7MPE

Phone now for the Best Price !! (If we print 'em ..... you won't believe 'em !!)

CUBASE STE IN STOCK !

all other top packages available.

★★★ SPECIAL OFFERS ★★★

PRO 12 V1.1 - PHONE

PRO 24 V3 - PHONE

PRODIGY - only £99.95

FM MELODY MAKER - £57.95

PHILIPS CM 8833

14" Medium Resolution Colour Monitor. RGB/RCBI, composite and audio inputs. Stereo speakers and green text mode. CGA compatible. Supplied with one of four leads : Atari STFM / Atari ST E Stereo / Amiga A500 Stereo / PC Lead for CGA card.

£259.00

inc vat + courier delivery

Star

All Star prices include VAT, parrallel lead, delivery and 12 Months On Site Warranty

Star LC10 Mono	£169.00
Star LC10 Colour	£219.95
Star LC24/10	£259.95
Star XB24/10	£499.95
Star XB24/15	£559.95
Colour Upgrade XB Range	£34.95

Genuine Star LC10 Ribbons...

5 x Black Ribbons	£16.95
10 x Black Ribbons	£32.95
5 x Colour Ribbons	£24.95
10 x Colour Ribbons	£47.95

13 PIN DIN PLUG (ST Monitor)	£ 1.95
14 PIN DIN PLUG (ST Disk Drive)	£ 2.25
14 PIN DIN SOCKET (ST D/Drive)	£ 2.95
SCART PLUG	£ 1.95
PARALLEL LEAD (ST/PC/AMIGA)	£ 3.99
MOUSE MAT (Hi Quality)	£ 3.50
JOYS/MOUSE EXTENSION LEAD	£ 4.75
ST REPLACEMENT MOUSE LEAD	£ 3.75

ST MONITOR SWITCH BOX only £14.95

ATARI STE

UPGRADES!

All STE packs include :

- ★ Atari 520STE Computer
- ★ RAM upgrade fitted internally
- ★ Hyper Paint graphics software
- ★ Hyper Draw graphics software
- ★ Borodino simulation software
- ★ Metacomco ST Basic
- ★ Prices include VAT & courier delivery

The AMAZING prices :

520 STE 512K RAM	£279.00
520 STE 1MB RAM	£329.00
520 STE 2MB RAM	£429.00
520 STE 4MB RAM	£599.00

D.I.Y. STE RAM UPGRADES :

520 STE to 1MB (2 x 256K Cards)	£62.50
520 STE to 2MB (2 x 1MB Cards)	£179.95
520 STE to 4MB (4 x 1MB Cards)	£359.95

Atari SM124 Mono Monitor	£ 99.99
Atari Megafile 30 Hard Disk	£ 429.95
Atari Megafile 60 Hard Disk	£ 595.00
Monitor Switch Box	£ 14.95
STE Stereo Scart Lead	£ 12.99

ATARI HARD DISK PACK

- ★ Atari 2MB Ram STE Computer + Mouse
- ★ Atari SM124 Monochrome Monitor
- ★ Atari Megafile 30 Hard Disk Drive
- ★ Hyper Paint, Hyper Draw, Borodino
- ★ Courier Delivery

£805 + vat

4MB STE HARD DISK PACK - £955 + VAT

ATARI 4MB LASER PACK

- ★ Atari 4MB Ram STE Computer + Mouse
- ★ Atari SM124 Monochrome Monitor
- ★ Atari SLM804 Laser Printer
- ★ Cumana External Disk Drive
- ★ Optional Software :
  - (i) Timeworks DTP
  - (ii) C-Lab Notator
- ★ Hyper Paint, Hyper Draw, Borodino
- ★ Courier Delivery
- ★ Add £429.95 for Megafile 30 Hard Disk

ATARI 4MB STE LASER PACK (with Timeworks DTP)

£1950.00 inc vat

ATARI 4MB STE LASER PACK (with C-Lab Notator)

£2265.00 inc vat

BEST PRICES

(DEPT NCE), UNIT A, GRAFTON PLACE, WORTHING, WEST SUSSEX. BN11 1QX

Access

(0903) 700714

VISA

YOU CAN PLACE YOUR ORDER 24 HOURS A DAY

All prices include VAT and delivery unless otherwise stated. Goods despatched same day whenever possible.

All prices are subject to change without notice. BEST PRICES only supply original equipment and not grey imports. All of our equipment is fully guaranteed. We stock all types of computer hardware and software - give us a call for our BEST PRICES.

Mail order only, callers and collections only by prior arrangement with us. Thank You.

NEXT DAY DELIVERY BY COURIER (MANY PRICES INCLUDE THIS ALREADY !)

ADD £5.00 INC VAT FOR ALL ORDERS OVER £100.00 INC VAT

ADD £7.50 INC VAT FOR ALL ORDERS UNDER £100.00 INC VAT

SHOPPING EXPRESS READER ADS

There are great bargains to be had in our reader ads section, but remember to check before you buy – we cannot be held responsible for the quality of the goods on offer!

● FOR SALE

CAMERA for digitising Panasonic CCTV WV-1410 High Resolution, ideal for Amiga, excellent condition £135.00 only .free Digiview 2. Ring 0539 84670.

M.S.X. Toshiba H.X.10. Computer, complete with manuals cassette recorder joystick games, hardly used, very good condition, £50 o.n.o. Tel 0639 887929. After 5pm.

AMIGA 500 memory expansion double drive games, one joystick,disc box, mouse mat, modulator will split. Offers, Royston 0763 248186..

BBC B Series 7, fitted Rom-Board, with GXR Printmaster W.P.Database Roms. Tape-Drive, 40/80 Disc-Drive, Green Screen Monitor, Modem. All manuals and cables £250. Phone 0293 29604.

ATARI ST originals £10, Falcon, Operation Wolf £5, Alien Syndrome, Marble Madness, Outrun, Virus, Elemental, Where Time Stood Still. Phone Steve 0530 243096, after 4 pm.

ATARIST software, all original, Falcon, Hard Drivin, Elite, Starglider 2, Degas, Super Hang-on, Timeworks, Outrun, Driller, Backlash, Space Harrier, Supersprint, plus more from £5 – 0726 64014 – evenings.

TATUNG Einstein, with WP, S/Sheet D.B.M.S, Software, £75. Colour Monitor 14 inches, needs Split Synch input. Hardly used, £85. Diablo 630 D/Wheel £135 – 051-632 6711

24PIN Colour Printer, Citizen HQP40, 200CPS, letter quality as new, £200. Contact Jon – 6, Upton Road, Chichester, West Sussex, PO19 2QQ or Tel. 0243 774767.

AMSTRAD CPC 464 Colour Monitor, £300 plus software, loads of mags and books, and back-up copier (Imager) Tel 0279 34906, (Harlow, Essex) £230 o.n.o.

SINCLAIR +3/48K Hardware and Software for sale, very cheap prices. Phone after 4pm, 0494 716404. Ask for Peter.

AMIGA Games for sale, all boxed original all at reasonable prices, must go. Ring St Helens 0744 54859.

CITIZEN 120D DMP, excellent condition, suitable for ST/Amiga, good quality NLQ printing, price £70 o.n.o. Tel Windsor 0753 864382.

C.64 1541 Disk Drive,C2N, plus lots good software R.P.G.s Adventures utilities and arcades worth over £1000 for sale at £280 o.n.o. Tel Southend 0702 331560.

EPSON GX80 Printer Manual wanted, will pay good price. Help my redundant printer come to life. Tel 0642 310957.

FERRANTI PC (IBM Comp). Twin floppy disc drives, mono display, manual and software £300 o.n.o. Tel 0273 464575. for details.

CBM64 1541 Disk Drive, Printer, Simon's Basic, W/P, Games, plenty books, £150-ish – Do yourself a favour, phone Derek 0387 811235 – evenings only.

AMSTRAD CPC6128 and Colour Monitor, plus Instruction Manual, Serial Printer, and Utilities Software. £175 o.n.o. – Ring 0932 874165.

SPECTRUM ZX+48K with joystick, programmable Interface Manuals etc, 90+ games including Robocop, Double Dragon, Outrun Afterburner, £60 o.n.o. Tel 0282 35435 .

MSX Konami Cartridges Road Fighter, Soccer, Yie Ar Kung Fu – £7 each. Cassette737 Flight Simulator, The Wreck – £6 each. Phone Scott 0862 810662 – Evenings.

AMSTRAD 464 & green monitor, excellent condition, joysticks, £500. Original software, manuals, "welcome" software, ideal as first-time computer. Only £280 o.n.o. Tel 0484 652267 – evenings.

SEIKOSHA GP100 Printer Plus DK Tronics Interface and extra Ribbons. £45 – Interested? 0827 285987.

AMSTRAD CPC Firmware Manual, DDI-1 Disk Drive, Rombo and Rom/Disk Software. S.A.E. for list to Richard Evans, St Edmunds Hall, OXFORD, OX1 4AR.

COMMODORE 64, Disk Drive, C2N, Joystick, £600 + software (business and games), mouse, magazines. Bargain – £180 – phone 0823 432564, ask for Edward.

PUSION, Savage, Ferrari Formula One, FFI only 1.2 Amigas, all Amiga originals – £20 the lot – phone Ian after 7pm 01-556 9147.

ATARI 800XL Computer with Omnimon Upgrade 1050 Drive with Hyperdrive Upgrade. Books. Disks. Digitizer. Touch Tablet. Complete System – £175 o.n.o. – Tel 0202 632004. Between 5pm-7pm.

ATARI ST Games – originals. Falcon, Elite, Starglider Two, Driller, Fun School Two. £8.00 each. Ouantum Paint, Sidewinder. £5.00 each. Tel 0737 248704 – Reigate, Surrey.

SPECTRUM Software (originals) 20 games cassettes, £22 – postage included. "Blast" Compiler, (Opus Disc) £3.50 – Tel 0258 880394.

C64, 1541 Disk Drive, C2N tape unit, Lazer Cartridge, Trippler Printor Interface, £1000's good quality software (RPG'S Serious, Adventures, Shootemups) – £260 ono. Tel Essex 0702 331560.

COMMODORE 64 Disk Drive Oceanic OC-118 with Disks, Games and Geos only £70. Tel Horsham, 0403 68276.

C64C – 7 year old, Joystick, 2 Patassettes Power Supply. Well over £300 worth of software including Great Giana Sisters, Turbo Outrun. Sell for £280. Phone 01-399-0734.

SAM COUPE for sale, Graphics Package Flash!, Demo Tape, Utility Tape, Manual and all literature. Also 10 Coupe compatible spectrum titles £185. Ring 0278 780796.

AMIGA Disk Drives, two. Internal fitting, 2 months use, perfect working order – £50 each or two for £80 or swap for Microtex Teletext Decoder. Tel 031-331 2110.

COMPUTACHAT

Are you a computer games player, programmer, musician or artist?

Would you like to talk to others like you to swap hints, tips, pokes or even software (must be originals or PD).

Are you interested in forming a group to buy blank disks or cassettes in bulk or would you just like to chat in general about computer orientated activities.

RING COMPUTACHAT ON

0898 338939

EXPERTS ON HAND TO ANSWER ADVENTURE QUERIES

TME PLC, Box 54, South West Manchester M15

Calls charged at 25p/min "cheap" rate - 38p at all other times

ADVENTURE HELPLINE

Do you play computer adventures? Have you ever been faced with a seemingly impossible situation?

WE CAN HELP

Our adventure rescue team work 7 days a week until midnight and will be pleased to answer your queries. We offer help with any games or any computer - so if you are tearing your hair out ring this number NOW!

0898 338 933

T.M.E Plc 10b Hulme Hall Road. Manchester M15 4LY

Calls charged at 25p min "cheap" rate/38p at all other times

LOOK! AMAZING OFFERS

3 1/2" DS/DD DISKS

100% Certified Error Free

Inc Labels

36p exc. VAT

3 1/2 DISK BOX
40 Cap £4.00
80 Cap £4.50

AMIGA MAXI PLAN OUR PRICE £50.00

TOP QUALITY DISKS

3 1/2 DS/HD ... 115p
5 1/4 DS/DD ... 28p
5 1/4 DS/HD ... 46p

AMIGA SUPERBASE PERSONAL II OUR PRICE £50.00

SAME DAY DESPATCH

AMIGAS	LOOK	ATARIS
Batman Pack.....£358	JOYSTICKS	Power Pack £349
A500 + Tenstar Pack ..£375	Black Cruiser	Explorer Pack £258
A500 Class of the 90's £495	£7.50	Ultimate Pack £429
Hi Res Colour Monitor.£249	Zipstick £10.80	Portfolio.....£222
3 1/2 External Drive £59	Quickshot £4.50	**720K Disk Drive with PSU £68.00**
		☆GAMES!☆ NOW AVAILABLE

ADD £3.25 P&P per disk order. ADD £8 next day delivery.
On Amigas/Ataris ALL PRICES INCLUDE VAT

CALL OR SEND CHEQUE TO B.C.S LTD,
349 DITCHLING ROAD, BRIGHTON BN1 6JJ

VISA

0273 506269 24 hours

BBC B 40/80 Disk Drive, Epson Printer, Philips Monitor, Rom/Ram Expansion Board, AMX Mouse, Super Art, Pagemaker, etc. Roms, Software, Joystick, Books. £440 Tel 01-904 7376.

SAM COUPE by MGT. Includes all tapes and literature, plus 10 Coupe Compatible Spectrum Titles, buyer to collect or pay P+P, Ring 0278 780796.

CPC Stuff-Multiface two £24. 6128 Speech Rom + Speakers £17. Hisoft 'C' £20. Prices include P+P. Contact: M Pinder, 4, Wham Hey, New Longton, Preston, PR4 4RU.

TANDY 102 Laptop £150. Colour Graphic Printer £35. Acoustic Coupler £35. Kaga Vision 2 Colour Monitor £140. Spectrum + ZX £60. Amber Monitor £30. Recorder £15. Tel Peter 01-947 8486.

NEW Computer Express Magazines Numbers 1 to 61. Immaculate condition. Buyer collects £20 ono. Call after 6pm – Shrewsbury 874660.

ATARI ST IM memory HI-RES Mono Monitor, two Disc Drives, GFA Basic Pascal Compiler and lots more £390 ono. Tel Steve 0932 824563 – office hours.

SEGA Mega Drive, 1 month old Pal £100.00. Phone Flax Bourton 3466. Ask for Nigel.

PC Engine, 1 month old £100.00. Phone Flax Bourton 3466 and ask for Nigel.

SPECTRUM joystick interface and m'switch joystick – £13 tel 0695 32818.

COMMODORE 64C, 1570 disc drive, mouse, Action Replay mks 100s games, disc & tape, disc box, joystick. A bargain at £350 o.n.o. Tel: (0253) 899506.

TOSHIBA HX-P550 Printer, Centronics, MSX compatible, brand new, unused £120 o.n.o. Also some MSX Word Processors etc. Tel: 01-531 6146 evenings.

CBM64 kit for sale, lots of bits cheap. Send S.A.E. for list. A. H. Foster, 24 Pansy Road, Bassett, Soton, SO2 3GR.

COMMODORE C64, C2N Datasette, 1541 disk drive, laser, trippler plus loadsa software Geos, R.P.G.'s, Adventures, Shoot 'em ups, Wordpro's, Graphics Packages, Music £275.00 o.n.o. (Southend) 0702 331560.

ST originals old but good and Verbatim disks for sale £30 inc. p&p. Tel: 0250 5108.

TANDY Pro 34, hardly used, unwanted Xmas present. Phone 01- 583 5459 9-11am only £120 (rrp £245) o.n.o.

1040STFM, second drive, forty games, STOS, Quantum Paint, plus others, all boxes, leads, etc. v.g.c. £600 o.n.o. Buyer collects. Ring (0245) 353688 and ask for Mark.

COMMODORE 64, C2N Cassette, 1571 disk drive, Brother printer, software, mouse, Light-pen, manuals, books, magazines, v.g.c. Cost £1200, sell £350 o.n.o. (0787) 77842 Suffolk.

DRAMS – new 16x 256 KBit (0.5Mb) which I'm told work with Amiga/ST. Numbers 64621A-15 or MSM4256P sale or interesting swap. Kyle, 25 Albyns, Langdon Hills, Essex, SS16 6LH.

SPECTRUM software Hisoft Basic £10, Qualitas fonts £4, hundreds of games including Robocop, Batman, Op. Wolf, etc. All originals in v.g.c. Prices £1 – £3. 01- 572 1165 Mike, Hounslow.

SPECTRUM hardware, Cheetah Midi Interface, three Drumkits for Specdrum, Currah Microslot, ZX Print III, Printer Interface. All in v.g.c. 01- 572 1165 – Hounslow.

TRACKERBALL for ST, fits mouse socket, two independent buttons, runs all mouse software but does not need desk space. Only £15 phone Dave 0635 297701 .

GREAT CBM 64 and disk drive, Datasette. Lots of software (games and business) RRP over £350. Offers around £200 – phone after 3.30. James (0455) 557734.

PRINTER lead for Amstrad 6128 £5. "Marble Madness" cassette £3. Post paid, also 6 books on Electron computing. Offers please. Durham 091-386 1493.

AMSOFT logo guide £4. Adv. 6128 Computing book £5. CPC 3-inch disks, "Snooker" £3. 4 game compilation £4. 3 Blanks £4 + post. Durham 091-386 1493.

ATARI 520STFM in excellent condition with all leads and manuals etc. original packaging, complete with over £150 of recent games. Only £250 – phone (0634) 30687.

BBC B, colour monitor, Twin disk drives, mouse, joystick and software £390. Tel: Brown, (0703) 552768.

MICROSOFT windows version 2 for IBM PS/2 & compatibles. 3.5 disks, box unopened, £35. IBM DOS version 3.30 3.5" disks all manuals, unused, £25. AA mags, Bristol (0272) 691471.

MASTER 128k, dual 5 1/4 DS (40-80) D/drive, Master ROM, + others, games, loadsa s/w, manuals, Plinth. Excellent condition £500. Phone 01- 805 2458 for details (ask for Chris).

16K DRAMS and Eproms all onboard disc control circuit open to reasonable offers. (075485) 668.

AMIGA one mega upgrade and one mega game. Cost together £115, yours for £70. Phone: (0689) 30183 anytime. Hurry!

£45. £45. Olivetti PR15 Dot Matrix Printer, Parallel interface, ST compatible, good working order. Phone Steve (0923) 677501 only £45.00.

OPUS PCIII Turbo, 1 Mb RAM, 20Mb Hard Disk, Multi-function display I/O card, Hercules Mono Monitor, 1 Heol-Y-Geifr, Pencoed, Mid Glamorgan, CF35 6UH. £450.

AMSTRAD PCW8512 with Supercalc 2, dBase II, spare ribbons and 25 new blank discs. All boxed as new! Only £300! Phone Paddy on (0225) 700036 evenings.

DISKS, Maxell HD DS/DD 3.5-inch 10 box at £15 per box or £130 the Lot. Unwanted gift as wrong size Enquiries – Nigel, Flat 3, 3 Fairmile, Henley, RG9 2JR.

ST original software from only £5 Chase HQ, Hard Drivin, Robocop, Running Man, Space Quest III, King Quest 1,2,3,4, plus more. Phone Russ (0732) 844175.

SPECTRUM serious software and utilities on +3 disc, Microdrive and cassette. S.A.E. for list – Kelvin McWha, 5 Argameols Close, Southport, Merseyside, PR8 6LH. Phone (0704) 42664 + loads of Spectrum books.

AMSTRAD CPC 464 With colour monitor and 133 games, 2 joystick all for £400 o.n.o. Tel: (0592) 759035.

MICRODRIVE plus interface 1 and 20 boxed cartridges for Spectrum £50. Phone Leamington Spa (0926) 334151.

TANDATA TD1604 Prestel viewdata terminal Thomson 14-inch mono monitor, offers or exchanges considered can deliver. (021) 749 2320.

SINCLAIR ZX81 computer plus extra 16K memory pack and small number of games £25 o.n.o. Phone (0252) 546412.

COMMODORE AMIGA A500

BATMAN MOVIE PACK

Amiga A500, Workbench 1.3, Mouse, Extras Disk, Tutorial Disk, Owners Handbook, Basic Handbook, Mouse Mat, TV Modulator, Deluxe Paint 2, F18 Interceptor, New Zealand Story, Batman.

ONLY £369.95

NEW!! MONSTER PACK

Amiga A500, Workbench 1.3, Mouse, Extras Disk, Tutorial Disk, Owners Handbook, Basic Handbook, Mouse Mat, TV Modulator, Paint Package, F18 Interceptor, New Zealand Story, Batman, Word Processor, Music Package, Tile Game, Commodore Sports Bag, Ten Blank Disks, Disk Box Holds 80 Disks, Vinyl Dust Cover, Microswitch, Joystick

ONLY £399.95

ALL AMIGA PRICES INCLUDE VAT, FITTED PLUG AND DELIVERY

ATARI 520ST

EXPLORER PACK
Atari 520ST, Mouse, Owners Handbook, Metacomo Basic Rev D, Sourcebook + Tutorial,

ONLY £279.95

POWER PACK A
Atari 520ST, Mouse, Owners Handbook, First Basic, First Music, Business Organiser Software, 20 Great Games, Atari CX40 Joystick

ONLY £359.95

POWER PACK B
Atari 520ST, Mouse, Owners Handbook, First Basic, First Music, Business Organiser Software, 20 Great Games, Atari CX40 Joystick, Vinyl Dust Cover, Twin Joystick Extend Lead, Disk Box for 80 Disks, Ten Blank DS/DD Disks, Second Joystick

ONLY £389.95

INCLUDING VAT AND DELIVERY

Plus FREE!! with any of the above Atari Packs a Superb Software Starter Pack comprising: WordProcessor, Spreadsheet, Spellchecker, Word Count Program, Neochrome, Mono Monitor Emulator, Database, Towers of Hanoi Game, Virus Killer, Sensori Game, Fruit Machine Game.

PLUS FREE with all Atari computers, Hyper Paint, Hyper Draw, Borodino RRP £79.00. Only whilst stocks last.

PERIPHERALS

STAR LC10 COLOUR PRINTER	STAR LC10 PRINTER	CUMANA CAX 354 AMIGA DISK DRIVE	PHILIPS CM8833 COLOUR MONITOR	CITIZEN 120D PRINTER	CUMANA CSA354 ST DISK DRIVE
£209.95	£169.95	£89.95	£249.95	£138.00	£92.95

ALL PERIPHERAL PRICES INCLUDE VAT, DELIVERY AND ANY LEADS NECESSARY TO CONNECT TO YOUR COMPUTER (PLEASE STATE)

SPECIAL OFFERS - WHILST STOCKS LAST

Commodore A501 RAM Expansion	£99.95	Deluxe Paint 2 Amiga	£19.95
Hyper Draw Atari ST	£9.95	Hyper Paint Atari ST	£9.95

The Works Platinum Edition Amiga RRP £!49.95 only £99.95

MAIL-CENTA

17, Campbell Street, Belper, Derby. DE5 1AP. Tel: 0773 826830

All prices include VAT and Delivery. However for orders under £10.00 please add a 50p handling charge. Personal callers welcome at our retail shop but please bring this advert as prices may vary. Closed Wednesdays. All items despatched same day whenever possible. Cheques may require a seven day clearance period. Prop. Martin Bridges

VISA

BUILD IT YOURSELF!

MOTHERBOARDS

XT TURBO
12MHz, V20, 0k, 8 slots. Small size, takes 256k x 4 DIL.
£62.10 + £4.50 p&p

AT TURBO
12MHz, 0k, up to 4 M on board. Seven slots, takes 256k x 1, or 256k x 4, or 1M x 1.
£158.00 + £4.50 p&p

AT TURBO PLUS
12MHz, up to 4M on board, Eight slots, takes 256k x 4 or SIPS. EMS fitted.
£188.00 + £4.50 p&p

STARTER SYSTEMS

Both include a full 1 Mbyte of RAM, 101/102 key keyboard, a 12" mono monitor, Hercules graphics, DR-DOS and a parallel port. Both run at 12MHz clock speed and have eight slots.

AT mini-tower £749
XT system £459

Delivery included

CASES

XT/AT CASE
Space for three 5.25" floppy/hard disk drives and one 3.5" drive.
£44.50 (+ £6 p&p)
180W PSU **£44.85 + £3**

DE-LUXE CASE
Same disk space but prettier! Speed display.
£65.00 (+ £6 p&p)

MINI TOWER CASE
AS DE-LUXE case but desk-top tower style.
£72.50 (+ £6 p&p)

PC-DIY BOOK

If you are not sure how to go about building your own PC, this book is for you. 112 pages full of DIY tips for £7.95 including postage.

VAT is INCLUDED in all our prices. Why not telephone or write for our FREE catalogue?

DISPLAY ADAPTORS

UNIVERSAL VGA
This board auto-switches between 8 and 16 bit, drives mono, EGA and VGA monitors, (in native mode) and supports all standard VGA modes. Easy upgrade to extended VGA to give 1024 by 768.
£137.00 (+ £2 p&p)

DUAL CGA/HERC
Auto-switch, plus port for printer.
£38.00 (+ £2 p&p)
102 keyboard **£46 + £5**

I/O ADAPTORS

RS232 short card
£16.10 (+ £2 p&p)

AT SERIAL/GAME/ PARALLEL CARD
Sockets for serial 2
£11.50 (+ £2 p&p)

FLOPPY CONTROLLER
for XT or AT, 360, 720, 1.2, 1.44. Two drives 3.5" or 5.25".
£24 (£2 p&p)

BLACKMORE ELECTRONICS LTD

4 THE PLOCKS
BLANDFORD FORUM
DORSET DT11 7AA

Telephone: (0258) 451347
Fax: (0258) 456046

VISA ACCESS AND AMERICAN EXPRESS ACCEPTED BY POST, TELEPHONE OR FAX

AMIGANUTS UNITED

RAYS PD LIBRARY IS NOW INTO ITS THIRD YEAR AND OFFERS THE LOWEST COPYING FEES IN THE U.K.
☆ STOP PAYING OVER THE ODDS FOR YOUR ☆
☆ PUBLIC DOMAIN SOFTWARE ☆
PRICES START AT ONLY FIFTY PENCE SELECTED FREEBIES WITH EVERY TEN PROGS ORDERED.

NO MEMBERSHIP OR OTHER HIDDEN FEES

A SPECIAL INTRODUCTORY OFFER TO THE FASCINATING WORLD OF PD

DISK 230 CONTAINING 44 GREAT SELECTABLE TUNES
DISK 260 THE EXCELLENT SCROLLING SPACE GAME CALLED BLIZZARD
DISK 389 THE VERY FUNNY PUGGS IN SPACE ANIMATION
DISK 401 PSEUDO-OPS LATEST AND BEST VIRUS KILLER/BRAINFILE
DISK 443 SIX EXCELLENT DEMOS, INCLUDING THE CAPT'S LOG/LASER DEMO
DISK 453 THREE NICE GAMES BY ANDERS BJERGEN AND A GREAT FILE WINDOW UTILITY
DISK 454 STARFLEET 1, A NICE VERTICAL SCROLL SPACE GAME BY DOMINIC BEADLE
DISK T34 ONE OF THE LATEST TBAG DISKS OF THE MONTH FROM TAMPA BAY U.S.A.

ONLY £1.85 EACH INCLUDING THE DISK AND RETURN POST/PACKING.

IF YOU DON'T HAVE A COPY OF THE 1990 LIBRARY DISK, LISTING HUNDREDS OF PD PROGS, (INCLUDES THREE NICE GAMES), SEND £1.85 AND ASK FOR THE 1990 LIBRARY DISK NOW!

UPDATES TO THE LIBRARY DISK ARE AVAILABLE AT REGULAR INTERVALS

Cheques/Postal Orders payable to: **Ray Burt-Frost,**
169, DALE VALLEY RD, HOLLYBROOK,
SOUTHAMPTON SO1 6QX
PLEASE NOTE: Some PD disks contain language that may be considered offensive.

• GAINSTAR REPAIRS •GAINSTAR REPAIRS • GAINSTAR REPAIRS •

IMB PC & COMPATIBLES
COMMODORE
SINCLAIR
ATARI
ACORN

GAINSTAR SOFTWARE LTD
COMPUTER REPAIRS
Avon House
Albany Park Ind Est
Camberley
Surrey
GU15 2PI

Tel: 0276 - 20144
0276 - 20226
Fax: 0276 - 29690

Our fast, friendly and efficient service to the general public and to the trade undertakes to repair any hardware from the above brands - GUARANTEED!

We offer you HIGH quality at a low cost so give us a ring at the above telephone number.

• GAINSTAR REPAIRS •GAINSTAR REPAIRS •GAINSTAR REPAIRS •

• GAINSTAR REPAIRS • GAINSTAR REPAIRS •

• GAINSTAR REPAIRS • GAINSTAR REPAIRS •

COMPUTER REPAIRS

Fixed Super Low Prices/
Inclusive of parts, labour and VAT

FIRST AID FOR TECHNOLOGY

1 WEEK TURNROUND

*** AMSTRAD / SINCLAIR AUTHORISED ***

SPECTRUM 48K	£14	C64	£22
SPECTRUM 128	£18	VIC 20, C+4	£22
SPECTRUM +2	£27	1541 DISK DRIVE	£36
C128	£29	C2N TDECK	£19
C16	£18	C64 PSU for sale	£27
Amiga	POA	Atari ST	POA

Please enclose payment with item - 3 month warranty on repair.
Please enclose advert with repair.

W.T.S. ELECTRONICS LTD
(NCE 08 03 90)
Studio Master House, Chaulend Lane, Luton, Beds. LU4 8EZ
Tel: 0582 491949
(4 lines) Standard terms of business apply

A.B Computer Supplies

Amiga A500 Bat Pack inc. modulator, Batman D Paint II, F18 and New Zealand Story.....**£369**
Amiga 2000 XT Pack inc. 1084s col. monitor, XT Bridgeboard and 20MB PC DOS Hard Disk....**£1349**
Commodore A501 Ram Expansion 512K **£112**
Commodore 1084s Colour Monitor.....**£249**
Cumana CAX354 on/off switch, daisychain **£89**
Branded Sony 3.5" DSDD per box of 10 .....**£12**

WE NOW STOCK SAM COUPE - POA
All Prices Include VAT and Delivery U.K.
Please send Cheque/P.O. to:
A.B. Computer Supplies, 103a Shellfield Road, Marshside, Southport, Merseyside PR9 9UL.
Tel: 0704-213544.

NEW! WORLDS FIRST POCKET PC

Atari Portfolio Pocket PC - inc. Spreadsheet - Time Manager - Address & Phone Book - Text Processor - Calendar & Comms Software. R.R.P. £249.99 **Our Price £219**

520STFM. Explorer Pack - Ranarama - ST Tutorial - Desktop ST Basic. Should be £299.99 **Our Price £269**

Power Pack

CX40 Joystick - Afterburner - Blacklamp - Bombjack - Bombuzal - Double Dragon - Eliminator - Gauntlet 2 - Nebulus - Outrun - Overlander - Pac Mania - Predator - R-Type - Space Harrier - Star Glider - Star Goose - Star Ray - Super Hang-On - Super Huey - Xenon - First Basic - Music Maker - Organiser

Only £349

Have a peaceful winter. Send your kids to Pluto for £349

Super Pack

1024k Ram - ST Basic - CX40 Joystick - Arkanoid II - Beyond The Ice Palace - Black Lamp - Buggy Boy - Chopper X - Eddie Edwards Super Ski - Ikari Warriors - Marble Madness - Quadralien - Ranarama - Return To Genesis - Road Wars - Seconds Out - Starquake - Summer Olympiad - Test Drive - Thrust - Thundercats - Wizball - Xenon - Zynaps - Organiser Productivity Software (Spreadsheet - Wordprocessor)

Our Price £449

Star LC24 - 24 pin Printer - Cut Sheet Feeder - Paper Park	£320
Cumana 1 meg Disk Drive	£95
Atari Corp Megafile - 30 meg ST Hard Disk Drive	£439
Casio MT240 Full Feature Midi Keyboard and Adaptor	£119

We supply all available software and hardware for all major computers. Send SAE for our full price list to:-
Expedite Trading, Unit F, 41 Union Street, Kettering Northants NN16 8JR
All prices include delivery and VAT

COMPUTER REPAIRS, SPARES, SALES

SPARES

Sinclair +2 Action pack	£140.00	Sinclair +3 Action pack	£190.00
C64 Light Fantastic pack	£150.00	Light Fantastic kit	£40.00
A500 Batman pack	£390.00	520 STFM Explorer pack	£290.00
Cambridge Z88	£220.00	A501 for Amiga	£110.00

REPAIRS

Spectrum 48k	£16.00	Microdrive	£16.00
128k +2 +3	£22.00	QL	£27.00
Interface 1	£18.00		

Many accessories in stock phone for prices. All prices include postage
Many spares and leads stocked
Send 20p stamp for prices (state computer)
Send cheque or postal order and computer to:

ACE REPAIRS, Outways Farm, Pelynt, Looe, Cornwall, PL13, 2NW.
Tel: 0503 20282

ATARI ST OWNERS

Why not complement the greatest home computer on the market by obtaining membership with the
MIDLAND GAMES LIBRARY
The greatest, biggest and best Atari Club on the market.

APPROX 2050 ST TITLES FOR HIRE

Games, Business, Education and utilities.

MIDLAND GAMES LIBRARY:

The company who over 5 years ago first conceived the idea of a software library.
Often purchasing popular programs in multiples of five or six to give all our members a fair chance. Always adding approximately 40 new programs monthly. Many very satisfied members, many as far away as Iceland, Sweden, West Germany, Holland, Denmark and Eire.
A fast efficient and friendly service operating a computerised custom built system to keep track of all your records, requests are attended to immediately, virtually assuring you 24 hour return service, regular newsletters and program updates, plus other inter-club activities.
SEND LARGE SAE TO

MIDLAND GAMES LIBRARY
Dept STF/11, 48 Redway, Bishops Cleeve, Cheltenham, Glos. Tel: 0242 67 4960 - 9.30am-4.30pm
All our programs are originals with full documentation

SPECTRUM TAPE TO DRIVE

Transpack I - for all drive systems. Includes CU5 and other software and sample transfers. Not for the novice...£12.00. For the difficult programs information books 1, 2 or 3 - 160 + Transfers per book with Transpack...£2.50 each. Send S.A.E. for lists.

SPECTRUM TAPE TO TAPE

TUC - copies most tapes. Measures loading speed, copies exactly blocks even over 51K + much more...£8.50

M/DRIVE OWNERS - MICROMATES

It pays for itself!....£11.99. Format (approx 104K), Clone, Sector Editor, Rename, Reconditions & Repairs, Multi-erase, Cat Copies tape to drive (not games) & Reverse, Drive to drive on Cartridge.

PLUS - 3 MATE

For Spectrum +3. Plus 3 mate has 5 disk programme inc. full Cat, Disk Repair/ Verify, Unerase, Sector Editor, Multiple Erase + File Copier, Disk info, Boot Prog., etc. Incudes Clone whole disk copier (inc. protected disks) On Disk...£12.99.

We Accept EXPRESS VOUCHERS

Spectrum Cold Compressor	£4.50
M/Drive Cartridge (Min. 4)	£1.75 each
+3 Discs (Min. 4)	£2.30 each

We Accept EXPRESS VOUCHERS

AMSTRAD/SPECTRUM VERSION Z80 TOOL KIT 2

Inc. Single Step - helps you understand/Debug M/Code, Assembler, + programme to do the reverse - M/Code to Source. Disassembler, Hex to Dec, Tool Kit, Loader Mode, etc.
Spectrum.....£8.99 Amstrad CPC Version.....£9.99

Send S.A.E. for details. Post Free in U.K. - Add £1.00 Europe - £2.00 rest. State your system when ordering. e.g. Spectrum +2 and Microdrive. Money back guarantee on software. Prop. L. Evans

LERM, Dept NCE 2, 11 Beaconsfield Close, Whitley Bay, Tyne and Wear, ME25 9UW,
Telephone: 091 253 3615, Send S.A.E. for details

MAKE YOUR MICRO EARN !

Yes making money with your micro becomes incidental when you know how. Your micro is, if only you knew it, a gold mine. The size and make is irrelevant. Make the initial effort **NOW** by starting your own

HOME BASED BUSINESS

This may be the most important move you will ever make!

REMEMBER: You'll never get rich by digging someone else's "ditch". Anyone in the country including YOU, can become very rich in a relatively short period of time just by doing a few basic things! It's more rewarding than playing games. The benefits are many and varied. Full or part time.
For **FREE** details send S.A.E. to:

HOME BASED BUSINESS

31 PILTON PLACE (NCE 15)
KING AND QUEEN STREET
WALWORTH, LONDON SE17 1DR

DIGITAL DISCS
(formerly Direct Disks)

3 1/2 DISKS 135 TPI DSDD WITH LABELS
LIFE TIME GUARANTEE
100% ERROR FREE

CHEQUES/PO MADE PAYABLE TO DIGITAL DISCS

£6.75 FOR 10 INC VAT & FREE DELIVERY IN UK

DIGITAL DISCS
60 BURNSIDE DR
BRAMCOTE HILLS
BEESTON
NOTTINGHAM
NG9 3EE

ALL COMPUTER HARDWARE AND SOFTWARE WANTED FOR CASH OR EXCHANGE

NOTHING REFUSED!!

01 727 0424

COMPUTER TODAY

TEL: 01-960 5578
FAX: 01-318 1439
481 Harrow Road London
W10 4RG

MONITORS OFFER
NEC CGA Colour
Only £99

Amiga Batpack £329
Atari ST Exp Pack £249
Schneider Euro PC with 12" colour monitor £499
And many more!! Ex VAT

MEMORY UPGRADES

Component Resources Limited

ATTENTION!
ATARI 520 STE USERS

Your 520 STE comes with 4 RAM card slots, two already fitted providing 1/2 Meg of memory. We can now offer you additional RAM cards, together with simple to follow instructions, to increase memory up to 4 MEGS

2 x (256K) RAM CARDS FOR 1 MEG	£60.00
2 x (1 MEG) RAM CARD FOR 2 MEG	£175.00
4 x (1 MEG) RAM CARD FOR 4 MEG	£255.00

CO-PROCESSORS	Price £
8087-8MHz	82.00
8087-10MHz	105.00
80287-8MHz	140.00
80287-10MHz	155.00
80387-16MHz	240.00
80387-20MHz	280.00
80387-25MHz	349.00

SPECIAL
Upgrade your AMSTRAD 1512 to 640K £23.50
Including Instructions

Send cheque/money order to:-
Component Resources Ltd.,
37A High Street, Offord D'Arcy,
HUNTINGDON, Cambs. PE18 9RF

ALL PRICES EXCLUDE VAT
ADD £1.50 Pack & Post
Allow 10 days for Delivery
Tel: 0480 812220 Fax: 0480 810020

EXPRESS COMPUTERS

SPECIALISTS IN SECOND USER IBM COMPATIBLE COMPUTERS & EQUIPMENT

● PRINTERS ● PERIPHERALS ●
● HARD DISKS ● COMPONENTS ●
● NETWORK INSTALLATIONS ●
● MAINTENANCE ●

CALL NOW FOR YOUR BEST POSSIBLE DEAL

(0604) 35519

COMPUTERS & HARDWARE ALSO PURCHASED FOR CASH

THE ULTIMATE SERVICE.
JUST RING 0898 36 24 36.
DARE YOU LISTEN?

(25p/38p per min)

NOVA brings you.....A new concept in Amiga PD - VALUE

NEW NOVA PD

FAST, PROFFESIONAL AND FRIENDLY AMIGA PD SERIVCE

HIGH QUALITY PUBLIC DOMAIN DISKS

£2.00 OR LESS*

WHY PAY MORE ?

Two Disk Catalogue £2.00

We'll get any PD disk for you - AT NO EXTRA CHARGE
NO EXTRA FEES - Write for overseas postage
FREE MONTHLY PRIZE DRAW
ALL Libraries available (Fish, TBAG, AGATron etc.)
Latest demos, animations etc.
Discount Hardware/Software/Disks etc.
i.e. PHOTON PAINT 2 £49.99 SONIX £39.99

*Prices start at £0000
Cheques/POs Payable to NOVA

NOVA (AF2), 30 Parsons St, Banbury, Oxon OX16 8LY ☎ (0295)262029

DISK DRIVES
all double sided double density
all brand new and guaranteed

Commodore 3.5" for 128 and many others	£59
Epson 5.25" ref SD540 with data	£55
NEC 3.5" extra compact with data	£59

Also your chance for **bargain of year** Sharp 4 colour plain paper printer plotter adaptable to most PC's £16. Send remittance or phone 0273 430380 for Access or Visa

M & B Electrical, 12 Boundary Road, Hove, BN3 4EH

YOU SAW THIS SPACE!
So Do 24,637 other prospective buyers every week!
To find out how this space could work for you,
CALL SIMON MOSS ON (0225) 442244

COMPUTER REPAIRS

Specialists in Home and Business Computers, all makes repaired.
ATARI, AMSTRAD, COMMODORE, SPECTRUM, SINCLAIR etc.
Atari Approved Service Centre.
We also repair Printers, Monitors, Disk Drives etc.
FREE estimates, all work fully guaranteed.

A.M.C., UNIT 4, WESTON ROAD INDUSTRIAL ESTATE, STRATFORD-UPON-AVON, WARKS, CV37 0AH
0789 292269

Evesham Micros

All prices include VAT and Delivery

ATARI

All our ST prices include: mouse etc. plus 5 disks of software including 'First Word' wordprocessor, utilities, 'Neochrome' graphics utility, game and demos.

520 STE POWER PACK

Amazing value, special ST package from Atari! Includes the very latest 520STE with 1Mb drive, joystick, mouse, user guide, 5 disks of public domain software, plus an incredible selection of chart-topping software with a total RRP of over £500! Software included is:

R-Type, Afterburner, Double Dragon, Super Hangon, Space Harrier, Overlander, Pacmania, Starglider, Super Huey, Eliminator, Predator, Bombjack, Out Run, Bombuzal, Xenon, Gauntlet II, Black Lamp, Starray, Nebulus, Stargoose, First Music, First Basic, Organiser

All for only £339.00 Inc VAT & delivery

520 STE Explorer Pack latest version with 1Mb drive, 512K RAM	£259.00
1040 STE includes 1Mb drive, 1Mb RAM, with built-in TV modulator	£399.00
Mega ST1 with monochrome monitor	£599.00
Mega ST2 with monochrome monitor	£849.00
Mega ST4 with monochrome monitor	£1099.00
SM124 monochrome monitor ..... £119.00 bought with an ST	£110.00
SC1224 colour monitor	£279.00
Philips CM8833 14" colour monitor (stereo sound) c/w ST cable	£249.00
Vidi-ST 16-tone video frame grabber inc.digitising software	£95.00
Vortex 40Mb HDplus Hard Disk	£499.00
5.25" External Drive 360/720K 40/80 track switchable	£99.00

Amstrad PC1512/1640/2086

We offer a wide choice of Amstrad PCs with many upgrade options. For the hard disk option, check our 'Evesham Upgraded Models'. Only the best will do - so we normally upgrade by means of a Western Digital Filecard, which includes XTree & SpeedRead software; however on single drive 1512/1640 models we can offer internal installations at the same price (leaving more expansion room but no upgrade opportunity for a 2nd floppy drive). Prices in lighter type exclude VAT.

Free with 1512 models... Ability and 4 US Gold Games

	SD	DD	AMS H.D.	SD 21MEG	DD 21MEG	SD 32MEG	DD 32MEG
				EVESHAM UPGRADED MODELS			
MONO 1512	384.35 **442.00**	477.39 **549.00**	N/A N/A	580.00 **667.00**	673.04 **774.00**	592.17 **681.00**	685.22 **788.00**
COLOUR 1512	494.78 **569.00**	555.65 **639.00**	N/A N/A	690.43 **794.00**	751.30 **864.00**	702.61 **808.00**	763.48 **878.00**
MONO 1640	474.78 **546.00**	555.65 **639.00**	738.26 **849.00**	670.43 **771.00**	751.30 **864.00**	682.61 **785.00**	763.48 **878.00**
CGA (COLOUR) 1640	581.74 **669.00**	651.30 **749.00**	825.22 **949.00**	777.39 **894.00**	846.96 **974.00**	789.57 **908.00**	859.13 **988.00**
EGA (ECD) 1640	677.39 **779.00**	738.26 **849.00**	938.26 **1079.00**	873.04 **1004.00**	933.91 **1074.00**	885.22 **1018.00**	946.09 **1088.00**
2086 MONO	564.35 **649.00**	633.91 **729.00**	813.04 **935.00**	760.00 **874.00**	829.57 **954.00**	772.17 **888.00**	841.74 **968.00**
2086 CD	656.52 **755.00**	726.09 **835.00**	903.48 **1039.00**	852.17 **980.00**	921.74 **1060.00**	864.35 **994.00**	933.91 **1074.00**
2086 12" HRCD	746.96 **859.00**	813.04 **935.00**	995.65 **1145.00**	942.61 **1084.00**	1008.70 **1160.00**	954.78 **1098.00**	1020.87 **1174.00**
2086 14" HRCD	833.91 **959.00**	903.48 **1039.00**	1086.09 **1249.00**	1029.57 **1184.00**	1099.13 **1264.00**	1033.04 **1188.00**	1111.30 **1278.00**

12 MONTHS ON-SITE MAINTENANCE PROVIDED WITH ALL MODELS OF PC1512, 1640 AND 2086 FREE OF CHARGE!

upgrades / accessories

1512 memory upgrade to 640K	£39.95	Enhancer 101 replacement keyboard	£74.95
Maths Co-processor 8087-2	£129.00	3.5" drive (720K) for SD models	£79.95
NEC V30 (8086 replacement)	£24.95	PC2000 series compatible 5.25" (360K) external drive	£84.95
Archive XL 40Mb Ext. tape streamer	£379.00	Genius GM6000 Mouse package	£34.95
Amstrad Modem Card V21/23	£99.00	Konix PC Joystick & Controller Card	£28.95
Communicate Fax Card SR	£199.00		

Amstrad PPCs

Low prices on all portable PCs - especially twin drive models
prices in brackets are excluding VAT

PPC512S	(£373.04) £429.00	PPC640S	(£477.39) £549.00
PPC512D	(£433.91) £499.00	PPC640D	(£546.96) £629.00

AMIGA 500 LOW COST RAM UPGRADE

ONLY £65.00 inc.VAT & delivery

512K RAM/CLOCK EXPANSION FEATURES :

- ☆ Direct replacement for the A501 expansion
- ☆ Convenient On / Off Memory Switch
- ☆ Auto-recharging battery backed Real-time Clock
- ☆ Compact unit size : Ultra-neat design
- ☆ Uses only 4 D-RAMs for High Reliability
- ☆ Low power consumption

RAM expansion without clock, only ... £57.00

AMIGA ACCESSORIES

External 5.25" 40/80 track switchable floppy drive	£114.95
Midi Interface by Omega Projects, including 30" serial connector	£29.95
Contriver Hi-Res replacement mouse, with mouse mat and pocket	£22.95
MiniGEN Genlock Adapter	£95.00
Vortex 'System 2000' 40Mb hard disk, with interface & software	£499.00
Philips CM8833 colour monitor (stereo sound) c/w cable	£249.00
Amiga 500 dust cover	£4.95

Amiga & ST 3.5" Drives

- ★ Very Quiet
- ★ Slimline Styling
- ★ Fully Compatible
- ★ Top quality Teac / Citizen drive mechanism
- ★ On / Off switch for Amiga
- ★ External plug-in PSU for ST
- ★ Throughport for Amiga
- ★ 1Mb unformatted capacity

Fully compatible, high quality 3.5" external drives for the ST and Amiga

Amiga version only £69.95
Atari ST version only £74.95
Prices include VAT & delivery

Western Digital Filecards

Upgrading your PC to hard disk? Look no further, we offer the best prices on top quality hardcards. Thorough documentation supplied, low power consumption, with free XTree file management software and Speedread. For Amstrad PC users we supply hardcards tested and formatted, with our simple software installation procedure. The best packages available!

21MB...£225.00 32MB...£239.00 41MB...£289.00

3.5" disks

10...£ 9.95 in plastic case £11.95
25...£22.95 in 40 cap case £29.95
Fully guaranteed double sided media

5.25" disks

25...£11.95 in 50 cap box £18.95
in 100 cap box £20.95
Fully guaranteed double sided media

PRINTERS

All prices include VAT, delivery and cable

star

We use and recommend Star printers since they do offer an unbeatable combination of features, print quality, reliability and value. Get it right with a Star at our special, all in, prices. We can provide on-site maintenance contracts for only £5.75 extra.

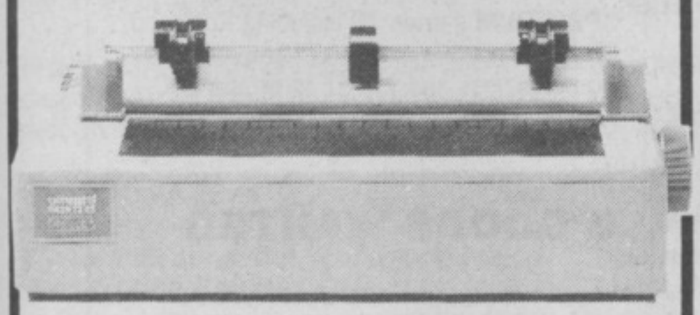
Star LC24-10 feature-packed multifont 24 pin printer, amazing low price	**£239.00**
Star LC10 best-selling 144/36cps printer, 4 NLQ fonts, inc.2 extra ribbons free	£169.00
Star LC10 7-colour version of above printer, inc.2 extra black ribbons	£215.00
Star LC15 wide carriage version of LC10	£329.00
Star LC24-15 wide carriage version of LC24-10	£409.00
Star FR-10 new Professional 9pin 300/76 cps, 31K buffer, 16 NLQ fonts, EE-PROM configuration memory and 12 months on-site maintenance	£399.00
Star FR-15 9pin as FR10, wide carriage version	£499.00
Star XB24-10 Professional 24pin: 27K buffer, 4 SLQ & 25 LQ fonts with EE-PROM configuration memory and 12 months on-site maintenance	£499.00
Star XB24-15 wide carriage version of XB24-10, with 41K buffer	£649.00
NEC P2+ budget 24pin	£299.00
Olivetti DM100S Super 9pin 200/30cps, inc.1 year on-site maintenance!	**£129.95**
Amstrad DMP3160/3250DI good value 10" 9pin	£169.00
Panasonic KXP1081 reliable budget 10" printer 120/24 cps	£159.00
Panasonic KXP1180 super new 9pin with over 3400 typestyles, 11" carriage	£179.00
Panasonic KXP1124 good quality 11" multifont 24pin printer	£269.00
Epson LX800 popular 10" 180/25 cps	£159.00

olivetti at Evesham Micros

Two names you can trust

SPECIAL PURCHASES

OLIVETTI DM100S



Top value, high performing 9-pin dot matrix printer

- 200cps draft, 30cps NLQ print speed
- Pica, Elite and Condensed printing
- Standard Centronics Parallel interface
- Friction and Tractor feed
- Optional auto cut sheet feeder available

UNBELIEVABLE PRICE !

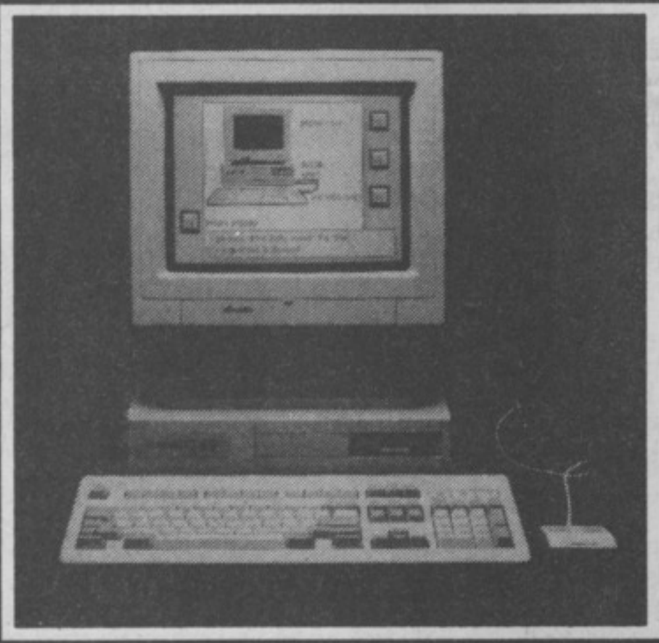
£129.95

Cut sheet feeder also available for only £79.95

Prices include VAT, delivery *and* 12 months on-site maintenance!

PCS series:

TOP QUALITY - HIGH PERFORMANCE!
All prices shown include VAT, delivery and 12 months on-site maintenance



PCS 86

	12" MONO	14" COLOUR
SINGLE FD	£688.85	£918.85
TWIN FD	£803.85	£1033.85
20MB HD	£1033.85	£1263.85

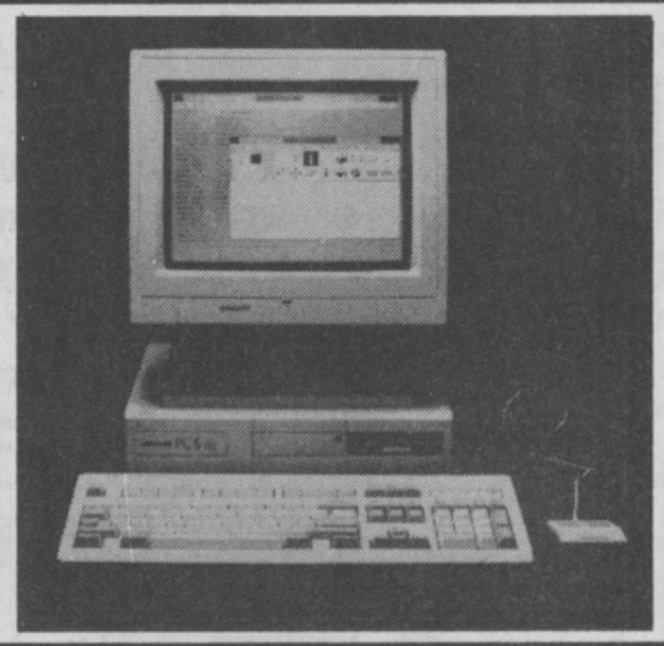
- NEC-V30 microprocessor 10Mhz clock speed, 0 wait states
- 640K RAM standard, upgradeable to 2.5Mb on motherboard
- Single or Double 3.5" floppy drives with 720K formatted capacity
- Optional 20Mb Hard Drive version also available, with 27ms access time
- 3 Full size 8-bit XT-compatible expansion slots
- Socket for 8087 maths co-processor
- 1 x RS232 Serial interface and 1 x Centronics Parallel interface
- VGA compatible (OVC) display controller fitted standard
- VGA monitor supplied: 14" Colour or 12" Flat-screen Mono. (dot pitch 0.39mm)
- Mini-din PS/2 interface sockets for keybaord and mouse
- 101/102 key AT-layout PS/2 compatible keyboard
- Optional 'Genius GM-U2' hi-res mouse available for only £49.95 inc.VAT
- Optional external 5.25" drive also available - phone to check availability.
- Plus: 'Logotron 8-in-1 Professional' integrated package, free with all models.

PCS 286

	12" MONO	14" COLOUR
TWIN FD	£1148.85	£1378.85
20MB HD	£1263.85	£1493.85
40MB HD	£1378.85	£1608.85

***FREE WITH ANY PCS 286* - OLIVETTI DM100S PRINTER AND 'LOGOTRON EIGHT-IN-ONE PROFESSIONAL' !**

- Intel 80286 microprocessor 12MHz clock speed, 1 wait states
- 1Mb RAM standard, upgradeable to 4Mb on motherboard
- Single or Twin 3.5" floppy drives with 1.44Mb formatted capacity
- Optional Hard Drive versions: 20Mb (27ms access time) or 40Mb (29ms)
- 3 Full size expansion slots; 1 x 8bit and 2 x 16bit XT/AT-compatible
- Socket for 80287 maths co-processor
- 1 x RS232 Serial interface and 1 x Centronics Parallel interface
- VGA monitor supplied: 14" Colour or 12" Flat-screen Mono. (dot pitch 0.39mm)
- Optional 'Genius GM-U2' hi-res mouse available for only £49.95 inc.VAT
- On-Board RAM upgrades now available - please phone for details
- We can substitute another printer of your choice with £129.95 allowance.

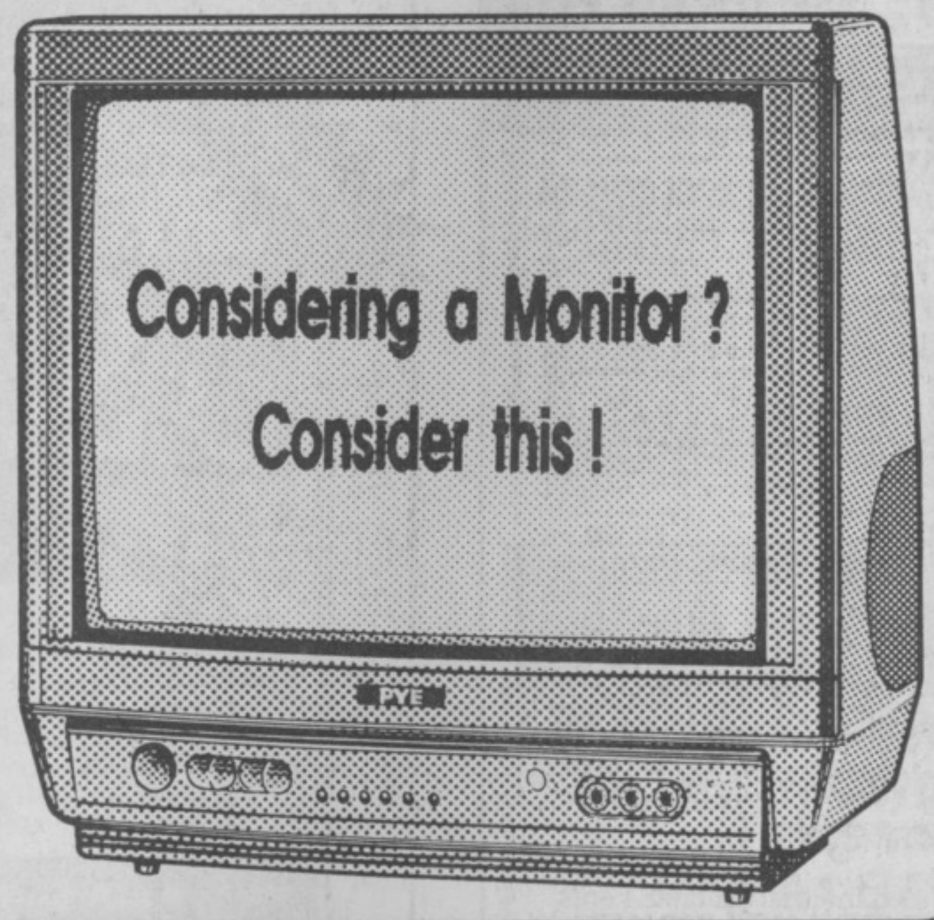


PYE 15" FST TV/Monitor (MODEL 2325)

With its dedicated monitor input, this model combines the advantages of a high quality medium resolution monitor with the convenience of remote control Teletext TV - at an excellent low price !

- ✔ Suits ST or Amiga (cable supplied)
- ✔ Teletext facilities
- ✔ Full infra-red remote control
- ✔ SCART Input/Output Connector
- ✔ Audio/Composite Video inputs
- ✔ 40 TV tuner presets
- ✔ Headphone private listening jack
- ✔ External aerial input (loop supplied)

£249.00
Includes VAT, delivery and computer connection lead



ATARI©

ABC-286

Prices include Olivetti DM100S printer and Logotron '8-in-1' integrated software package !

- ☆ 80286 Processor with 8Mhz clock speed
- ☆ 640K RAM standard, expandable to 1Mb
- ☆ 3 AT / XT compatible Expansion slots
- ☆ 1 RS232 Serial and 1 Parallel ports
- ☆ Disk controller supports 2 floppy & 2 hard drives
- ☆ One 3.5" (720K) floppy drive and a 30Mb hard disk drive fitted as standard
- ☆ Socket for 80287-8 Maths Co-Processor
- ☆ Video graphics adapter supports EGA, CGA, MDA and Hercules, with digital video port
- ☆ 102-key DIN spec. AT-Protocol keyboard
- ☆ Supplied with MS-DOS 3.3 and GW-BASIC

ABC-286 S.D./30Mb with Mono Monitor ..... £ 999.00

ABC-286 S.D./30Mb with EGA Monitor £1149.00

Optional 5.25" 1.2Mb internally fitted floppy drive available £119.00

Prices include VAT/Delivery

OLIVETTI PG-306

High performance HP-Laserjet compatible laserprinter

- ❒ 75 to 300 dpi graphics resolution
- ❒ 6 pages/min. (A4/B5/letter/legal)
- ❒ 8 resident fonts including Courier
- ❒ 512K RAM (upgradeable)
- ❒ Standard Centronics interface
- ❒ Expansion possibilities include PostScript board & serial interface
- ❒ Toner cartridge & drum supplied
- ❒ 12 months on-site maintenance

£1144.25
INC.VAT, DELIVERY AND 12 MONTHS ON-SITE MAINTENANCE

How to order from Evesham Micros

All prices include VAT and delivery. Express Courier delivery £5.00 extra.

Send cheque, Postal Order or ACCESS/VISA card details

VISA

MAIL ORDER SALES : ☎ 0386-765500

Access

Technical Support (Mon-Fri): 0386-40303

Govt., educ. & PLC orders welcome
Same day despatch whenever possible
All products covered by 1 year guarantee
All goods subject to availability, E.&O.E.

Evesham Micros Ltd
UNIT 9 ST RICHARDS RD
EVESHAM
WORCS WR11 6XJ
✆ 0386-765500
fax 0386-765354

Retail outlets at :
1762 Pershore Road, Cotteridge, Birmingham B30 3BH Tel: 021 458 4564
63 Bridge Street, Evesham, Worcs WR11 4SF Tel: 0386 765180
5 Glisson Road, Cambridge CB1 2HA Tel: 0223 323898

ORIC Atmos 48K complete with manual, 3 books, various games inc. Chess, Wordprocessor (Wordsworth), User group info included. Any offers to (0787) 227898 (Suffolk).

ACORN comp. and software £160 o.n.o. Tel: (0908) 510 284.

C64C cassette, 1 joystick, mouse & software over £350. Software inc. Batman Turbo, Outrun & Powerdrift worth altogether over £550 sell for £200 o.n.o. Buyer collects. Tel: (0923) 778750.

ACORN colour monitor for sale, brand new, still boxed with all leads. A bargain at £150, please phone (0634) 366982 for details, might deliver.

SPECTRUM +2 Cheetah 125+, joystick £60 o.n.o. Over 100 games including Chase HQ, Microprose Soccer, £100 o.n.o. Combined Price £150 o.n.o. Tel: (0684) 561 222.

PACE Linnet modem. V21/V23 with cable for ST, Amiga or PC £90. Write: Jerome Pimmel, Springfield Lodge, Kings Road, St. Peter Port, Guernsey, CI.

FOR sale Commodore 64. 2 Tape decks, Power Pack £300 worth of software, good condition, will sell for £160 o.n.o Tel: Birmingham 747 8533.

COMMODORE 64, disk drive with Phantom 300+ disks, approx 2500 progs. Expert cartridge, books & extras, £300 o.n.o. Bell, 1 Sutton Way, South Shields, Tyne & Wear, ME34 7QG. Tel: (091) 4544681.

AMSTRAD Action magazine for sale, nos 4,8,9,10,12-15, good condition £10. Price includes original cover tapes and postage. Please write to: Andy, 35 Roseberry Avenue, Worthing, BN12 4EX.

ORCHID Turbo EGA card. Adds a 286 and EGA graphics to your old 8088 PC/XT, only £80 brand new! Write to: P. Roberts, 5 Arlington Close, Yeovil, Somerset, BA21 3TB.

AMSTRAD PC software, original Supercalc 3.21 Spreadsheet as new, full instructions and Answercalc, 5 1/4 and 3.5 format disks, only £75, Bristol area (0454) 312794.

GEM 1st Word Plus package package, includes GEM/3 desktop, GEMpaint, runs on PC/XT, PC/AT, PS/2 or 100% – compatibles, excellent condition, genuine bargain at £69 o.n.o. Tel: (0344) 421252.

DISKS 3.5-inch Sony unbranded 135tpi still boxed DS/DD qty 100 unwanted gift. Must go £45 the lot. Ring John between 6.00pm – 10.00pm on (0274) 727415.

AMIGA software £7.00 each Batman, Interceptor, New Zealand Story, Powerdrift, Super HangOn, Afterburner, Operation Wolf, The Dual, Silkworm & Capone. Tel: Bob 01-949 0240 answerphone.

FOUR Phillips P5010 Satellite workstations are either standalone or can be connected to Phillips P5020 offers to Nick Cleveley (0858) 32374.

PHILLIPS P5020 Twin 5 1/4-inch drive dedicated wordprocessor with Daisy Wheel Printer and all software can also be linked to satellites. Offers Cleveley (0858) 32374.

PHILLIPS P5002 Twin 8.5-inch drive dedicated wordprocessor with Qume Daisy Wheel Printer and all software. Offers to Nick Cleveley (0858) 32374.

DRAGON 32 with mains adaptor, 2 joysticks, leads, manuals, including games: Lunar Patrol, Dragon Chess, Shenanigans etc. All v.g.c. Offers (0703) 615109.

ATARI Mini Office II £10.00 Atari Writer Plus £10.00 both require disk drive. Tel: (061) 223 5974 will post.

SPECTRUM 128K +2A, about £150 worth of games, Cheetah + Joystick, very good condition. All for £200. Ring (0793) 727637 after 5pm.

AMSTRAD CPC464 computer, some games, no modulator/monitor, perfect condition, £110 o.n.o Amiga Batpack software including Batman, DPaint II etc. £60 Atari ST Summerpack software, £60 o.n.o. Tel: (evenings) Middx. 574 5675.

VIDEO Thing system for Commodore 64 also Business software all on disk and originals – offers 01- 800 9269.

BBC B+ Shadow RAM, Sideways RAM, 20 or more cassette games, green monitor, leads, manual (user guide), mags, £150. Tel: Mark on (0742) 482820.

AMIGA A500, A501 upgrade, 1Mb external drive, plus over £500 of software worth £1000+ new, sell for £700 o.n.o. Phone Chris 01- 561 4377 (after 5pm).

ST games £5 Joan/Arc, Voyager, Hacker I & II, Leg. of Sword, Galdregon's Domain, Star Wars, Space Quest I, Powerdrive, also Falcon £12, Rocket Ranger, War Mid. Earth £5 both. Phone anytime (061) 794 5801.

AMSTRAD PCW8512 complete package including printer etc. extremely good condition as new, boxed £350 will haggle – Wigan (0942) 45648.

AMIGA datadisk for Superbase Personal. Complete British Amiga magazine index. S.A.E. for details or £10 for disk to: Twiddle, 52 Littleham Close, Bransholme, Hull HU7 4RR.

AMIGA games: Kick Off, It Came From The Desert, Flight Sim. 2, New Zealand Story, Shuffle Puck Cafe, Populous, Bubble Bobble, Shogun, Sim. City, £9 each. Tel: 01-789 3978.

SPECTRUM +3 Joystick games and multiface 3 all for just £150 o.n.o. Phone 01-391 4125.

C64 Programmers Reference Guide £6.00, Neos Mouse and Cheese, no instructions £13.00. Turbo 30 cartridge £10.00. Michael Vainola, 5 Woodside Cottages, Highwood, Chelmsford, Essex, CM1 3RD.

COMMODORE MPS1230 printer never been used, unwanted gift £130 o.n.o. Phone Castleford (0977) 519419.

BBC B+ plus Cumana dual drives, Cub monitor, Epson printer £550 o.n.o. Phone Steve or Allen on (0204) 395891.

SPECTRUM games 70 including Robocop, Dragon Ninja, We Are The Champions Plus 26 magazines and a FREE interface £30, will separate Canvey Island 0268 691658.

● GOODS WANTED

'SAGA' Keyboard wanted for Spectrum either Saga – "2+"/"3-Elite"/"2001"/"Commander", Good price paid, any details/offers, please phone anytime (Cash waiting) phone 0743 249094.

WANTED Technical/Repair Manuals or info for NEC FD1036A Disk Drive. Contact Mr A. Telford, 14 Beaufort West, Bath, BA1 6QB.

WANTED Repair Manuals for Atari ST, Amiga. Contact Mr A Telford, 14 Beaufort West, Bath, BA1 6QB.

WANTED for Epson LQ800 Printer: Tractor Unit, Paper Guide and Print Head. Contact Mr A Telford, 14 Beaufort West, Bath BA1 6QB.

ONCE BYTTEN® "THE TRADE-IN POST"
59 Swanley Road
Welling
Kent DA16 1LL
Tel: 01-304 2631 Fax: 01-304 7214

WE SELL SERIOUS MACHINES AT SILLY PRICES

EPSON PC - PRICES INCLUDE MONITOR & VAT

286-	MONO	COLOUR VGA
AX2E 12 Mhz 1FDD	£1450	£1689
AX2E 12 Mhz 40mb HDD	£1659	£1889
386-		
AX3S 16Mhz 40Mb HDD	£2099	£2340
AX3 20Mhz 40Mb HDD	£2735	£2999
AX3 25Mhz 100Mb HDD	£3849	£3999

AMSTRAD - PRICES INCLUDE ON-SITE WARRANTY & VAT

286 -	MONO	COLOUR	HI-RES COLOUR 14"
PC2286 40Mb HDD	£1245	£1399	£1555
386 -			
PC2386 65Mb HDD	£2079	£2235	£2389

COMMODORE - PC STARTER PACKS AS SEEN ON TV!
PRICES INCLUDE ON-SITE WARRANTY & VAT

	MONO	COLOUR	HI-RES COLOUR
PC10 XT 1FDD	£599	£755	£885 (VGA)
PC10 XT 2FDD	£649	£799	£935 (VGA)
PC20 XT 20Mb HDD	£829	£989	£1149 (VGA)
PC30 AT 20Mb HDD	£1199	£N/A	£1399 (EGA)

(ASK FOR VGA MONO PRICING & PC30 VGA OPTION PRICING)

HEWLETT-PACKARD - INC ON-SITE WARRANTY & VAT
NEW! THE H-P LASERJET III LASER PRINTER
1Mb RAM 8ppm, 14Internal Bitmapped Fonts 8 Internal Scalable Fonts
16,000 cpm usage (LJII 12,000) OUR PRICE ONLY £1699 INC VAT
ALL H-P PRODUCTS AVAILABLE AT COMPETITIVE PRICES
DESKJETS, PAINTJETS, LASERJETS ETC. PLEASE PHONE EDUCATIONAL DISCOUNTS AVAILABLE ON ALL H-P PRODUCTS.

SECONDHAND

Amstrad PC2086 30MBHDD 14" HRCD - Boxed	£899 Inc VAT
Commodore A2000 2FDD - Boxed	£650 Inc VAT
Kaypro Laptop 256K MS-DOS 1FDD & Case	£199 Inc VAT
Citizen HQP-40 24 Pin + Colour Kit	£225 Inc VAT

IMPORTANT WAFFLE - CARRIAGE CHARGES: Computers & Monitors £10 together £15 Printers £10 Overseas and European orders are welcome and receive our careful attention. Please ask for a quote for VAT free export orders.
OFFICE HOURS are 10am - 8pm Mon-Sat - Callers are VERY Welcome BUT please phone first.

Reach the top with... LCL
Self - Tuition Courses

World leaders - Hons graduate/teacher authors - At all major shows - £5 off total for 2, £10 off for 3

NEW FOR AMIGA

MICRO MATHS
Complete course taking beginners to GCSE in 24 programs (lessons) on 59 topics + 2 books, £24 (ST, AMIGA, PC, PCW, CPC, BBC)

MICRO FRENCH
Complete course taking beginners to GCSE with real speech & graphics adventure game, 24 programs + 2 books. £24 (ST, AMIGA, PC, BBC).

MICRO ENGLISH
Complete course taking age 8 years to GCSE in English Language, or EFL, with real speech. Spelling, punctuation etc. 24 programmes + 2 books. £24 (AMIGA, CPC, PCW, BBC).

PRIMARY MATHS COURSE
Complete course taking age 3 years to secondary school entrance, using moving colour pictures. National Curriculum Levels 1-4 24 programs + 2 books. £24 (ST, PC, CPC, BBC).

MEGA MATHS
A-level step-by-step course of 24 programs. Full screen graphics for calculus. £24 (ST, PC, CPC, BBC).

Send coupon and cheques/PO's or phone orders or requests for free colour poster/catalogue to:
LCL (DEPT NCE) THAMES HOUSE, 73 BLANDY ROAD, HENLEY-ON-THAMES, OXON RG9 1QB

VISA or ring 0491 579345 (24 hrs) Access

Name.....
Address.....
Title.....
Computer.....

ATARI 800XL Owner with 810 Disk Drive, requires Manual on both. "Only works when in good mood". Phone after 6.30 pm. 0268 557157. Ask for Peter.

WANTED any damaged, broken computers that are not working or have bits missing will pay up to £25 . Phone 0924 381574.

MSX2 wanted Disk Drive 720K double side 3.5-inch internal. Willing to pay up to £60. Phone Claudio on 0723 354273 after 7pm.

WANTED Game Command Modules for Texas Computer Model T1-99. Contact 0394 671172.

AMIGA FORMAT magazines issues 1, 2, 3, and 4 wanted. Reasonable price offered. Will buy seperately. Contact Philip 08206 22398 after 4.30pm weekdays.

TANDY 1000HX memory plus Expansion Adaptor (CAT 25-1062). Any condition considered. Contact John 0695 577317.

WANTED Book called the Jupiter Ace by Owen Bishop, very rare book, does anyone have it. Write to Peter Baillie, Flat 119, Mount Lane, Mount Pleasant, Bracknell, Berks.

WANTED Z88 swap two ZX80's, also Rampack books, very rare, collectors items. Write to Peter Baillie, Flat 119, Mount Pleasant, Bracknell, Berks. No time wasters please.

ATARI ST Software OIDS – £6, Night Raiders – £6. Telephone Brentwood 216112.

HELP. My last hope. Can anyone send me the pin-out diagram for the O.E.L. Telemod 2 Modem. I want to connect it to my Amiga. Contact Graham Woodcock, 0226 204147.

WANTED Apricot F1 Memory Upgrade, also software books, other hardware colour monitor, etc. Ring Barnsley 0226 757835 after 6pm. Please can somebody help me.

WANTED 1541 Disk Drive for C64. Tel 0502 713232.

WANTED S.O.S. Disk for Apple III and communications disk. Phone John after 7pm 0942 878711.

WANTED Xectrex Cartridges. Phone Melksham 708747 between 6pm and 10pm.

WANTED PRO Tennis Tour for Amiga or ST . Contact R. Woodhead, 45 Riddings Court, Annesley Close, Hasland, Chesterfield, Derbyshire, S41 ORQ. Tel 237865. Cash or Swap.

MULTIFACE 128K wanted, must be in good condition, all offers considered, also wanted "Mutant Monty" Spectrum 48K. Write to 137/B Folkestone Road, Eastham, London, E6 4AZ.

DESPERATE student requires 280 Micro Professor to help studies, Manuals and Peripherals welcome. Contact Mr T Wiseman, 19 Foxbush, Hildenborough, Kent, TN11 9HT.

COLOUR MONITOR to suite Atari ST , has to be cheap! Write to M. Kane, 58C Brooke Court, Highfields, STAFFORD.

I.B.M. Convertable Twin Drive as new. 512K Battery Pack etc, wanted to exchange for 1640 D.D. Colour System or similar value around £400. Tel 0268 685366.

OLYMPUS OM-10 35mm Camera out fit, plus lenses, lights, hard carrying cage. Wanted 1640 DD Colour PC or similar value, around £450. Contact 0268 685366 (Essex).

WANTED MSX Cartridges Games Phone 0392 876404.

AMIGA contacts wanted for games etc. Wanted – cheap electrical goods (new) and latest videos. Contact Robert, 17, Sondes Place Drive, Dorking, Surrey, RM4 3ED. Tel 0306 889428.

AMIGA games, will swap Strider or Shadow of the Beast for Dungeon Master, Dragon's Lair, ITCD, or F-29 Retaliator or sell. Phone 092 575 4175.

MEGADRIVE games, will swap Altered Beast for any of the following: Super Hang On, Super Shindoi, Rambo 3, World Cup Soccer. Phone 092 575 4175.

WANTED 24-Pin Epson – Compatable Printer, must be in good condition, Parallel only. Tel Woking 0483 764857.

WANTED All Atari XE/XL Games on cassette. Contact Andrew Gilbey, 1 Eastbrook Avenue, Dagenham, Essex.

WANTED 65 and 67 of NCE, CASLP waiting. Contact Richard Carrington, 4 Beaconsfield Street, Fenham, Newcastle Upon Tyne NE4 5JN.

SWAP my 3.5 external Amiga d/drive for your Star LC10 Sheet Feeder. Phone 0703 226957. Ask for Steve.

WANTED Amiga 500 Internal Drive mine's knackered!!! Phone 01- 684 5138 Ask for John.

ATARI ST 1040 STF or FM wanted, will consider non-worker phone Chris Bristol 0272 781178.

WANTED MSX Disk Drive + interface or just the interface 0302 320215 evenings.

SPECTRUM 48K cassettes 17 games 2 utility 2 books £17.50 (+post) the lot or will split Tel: Rochdale 0706 49535.

ELECTRON Solidisc 'EDFS' disc interface wanted. Phone Leeds (0532) 867996 after 6pm.

WANTED: Dr. T's MRS Recording Studio will pay £20. Stuart 0621 816400 after 7pm. (Amiga).

WANTED Sheet Feeder for an Epson FX-85 printer good price paid. Telephone (0507) 84396 after 6.00pm.

SWAP ST New Zealand Story and Zak Mackracken for ST Leisure Suit I, II. Write to Alan 12 Town ST Lound Retford, Notts, DN22 8RN.

HAS anybody out there got any word processor software for the Amiga going cheap? (£10-£15). Originals only please. Tel: 061-761 6541 for Richard.

HAS anybody got a music utilities or program they could swap me for TV sports football and Better Dead than Alien. Tel: Ben 0533 359876.

WANTED! Amstrad CPC 464, 664, or 6128 will pay around £100. No games or accessories needed phone Chris on 0245 320203.

WANTED for Amiga A500, Bubble Bobble, Cash waiting. Tel (0282) 815194 or write 14 Cobdenst, Barnoldswick, Nr Colne, Lancs. BB8 5AJ. For Promp reply. Ask for Tony.

WANTED Up Periscope and Gato for CBM 64 also used 5.25-inch disks for CBM 64 0757 706343 Steve.

WANTED disc drives, hard drives etc. Working or not, anything considered. Phone Nahim evenings 0274 492381 Bradford also wanted PCW's interface please call today.

WANTED Printmaster. From Siren Software 56 Houldsworth Crescent, Coventry. CV6 4HJ. Phone (0203) 362063 Ray Neal.

£20 reward for the finder of the Data Book for Yamaha V9938 video processor I.C. Phone Wayne on 078481 2581 please!

DOUBLE SIDED DOUBLE DENSITY

3½"

135 TPI 100% error free fully certified

FREE LABELS

LOW PRICE TOP QUALITY PRODUCT!

PROMPT DESPATCH

Bulk 5¼ certified 48 TPI disks complete packaged in tens. **£3.13 per pack**

INC VAT

42p EACH

DISK STORAGE BOXES
40 cap 3½" £3.50
80 cap 3½" £3.95

NEW! Mouse pockets £2.95 Mouse mats £2.64

PRINTER RIBBONS
LARGE STOCKS
CALL FOR
BEST PRICES

Now available 5¼" Disks

All prices inc VAT. Please add £3.50 post and packing per order. £10 for overnight delivery. All offers subject to availability.

VISA Access

IMMEDIATE MEDIA
11 Bakewell Road
Peterborough PE2 OXU
Telephone 0733-371-617
24 hour service

HAT Software

New!! Learning to Type
A typing tutor for the young and not so young. Ladies, do you want to return to the modern office but are unsure about your keyboard skills? Brush them up at home. The kids can enjoy the "Shoot 'em up" game to improve their skills and speeds.

Only £14.95, or direct from us at £15.45 inc P & P.

Also JIGSPELL, the spelling support program, FIRST PAINT and STAGE 2, our well established graphics packages, and many more. Send for our full list.

21, Wyle Cap, Shrewsbury, SY1 1XB
Tel: 0743 231763

16/32 P.D.

PUBLIC DOMAIN FOR THE ATARI ST
Large Selection
Prices start from £1.00
Send A4 SAE with 25p stamp for catalogue or £1.25 for catalogue DISK with extra goodies to:
35 Northcote Road, Strood, Kent ME2 2DH
Tel: 0634 710 788
Please state type of disk (single/double sided)

CROWN
Communications

OFFICE 4 1548 ASHTON OLD Rd OPENSHAW MANCHESTER

OFFICE TEL: 061 371 8269 FAX: 061 371 8254

Proprietor: P Johnson

Are offering the following positions

PROGRAMMERS

Programmers are required for the following machines,

1) PC (assembly level only)
2) Amiga
3) Atari ST
4) Archimedes

You will be expected to work in an office environment and to work closely with the project manager, the projects you work on (namely games) will last from 3 to 12 months and will be intensive and hopefully breaking new ground with the machine concerned. The pay will be according to experience and will be in the range of £7000 to £12000 per annum.

GRAPHIC ARTISTS

Graphic artists of exceptional quality are also required for the above machines, if you're a wizz kid with the pixels then we want to hear from you, if not then don't bother. Again pay is according to experience and ranges from £7000 to £12000 per annum.

PROJECT MANAGERS

Project managers who have experience with at least two of the above machines are required. The candidates must be able to show management potential as well as have a good programming background. Pay is expected to be around £18000 per annum.

ONLY IN EXCEPTIONAL CASES will we look to using a freelance programmer or artist so **don't** build your hopes up on that score.

We are also interested in looking at completed games with an eye to publishing them and game designs.

a word of advice

When sending disks for evaluation remember to label them clearly with both your full name and telephone number, and also the machine format, this prevents your work being ignored.

Programmers please don't just send in demos, ie a bouncing copper routine on the Amiga, this will hardly distinguish you from the crowd. Try to send a sample of a shootem-up you started or better still one you finished.

Try make programs autoloading or use a slide show for Artwork, this saves time when evaluating your work and puts it in a much more favourable light.

Never just turn up on the door step, it is unlikely that the person that you need to see will be available and it won't put you in a good light.

Try not to ask for your disk back and if you must have it back than be sure to send a prepaid envelope with it.
If you want to find out how your work was received then just make a polite call asking if the disk got there okay.

And most of all make sure we can read your hand-writing, a little time on preparing your work could mean the difference between you having the job or not.

If you follow these simple rules then you will find your application a lot more successful with ourselves and probably other companies as well.

Please send C.V. to: CROWN COMMUNICATIONS,

Office 4 1548 Ashton Old Rd, Openshaw, Manchester. Or Tel: 061 371 8269 Fax: 061 371 8254

a breath of fresh air

Based in Henley-on-Thames, south Oxfordshire, Applied Interactive Technology is an interactive software development house with a broad range of blue-chip clients. We are looking for two more special individuals to join our Design & Communication Department and strengthen our creative team.

Experienced **Computer Graphics Artist** capable of producing high quality artwork on the Amiga and PC using DPaint software. Real interest, enthusiasm and an eye for detail are essential.

Creative **designer** with fresh ideas to work with PC graphics technology, PC animation, digital video and traditional media.

Both positions offer excellent negotiable salaries.

If you would like to work in an attractive part of the country, within a young, exciting team, please write (enclosing c.v.) to:

Steve Gibson/Matthew Tidbury
A.I.T. Ltd.
The Old Assembly Rooms
16 Bell Street
Henley-on-Thames
Oxon RG9 2BG

DIGITA INTERNATIONAL

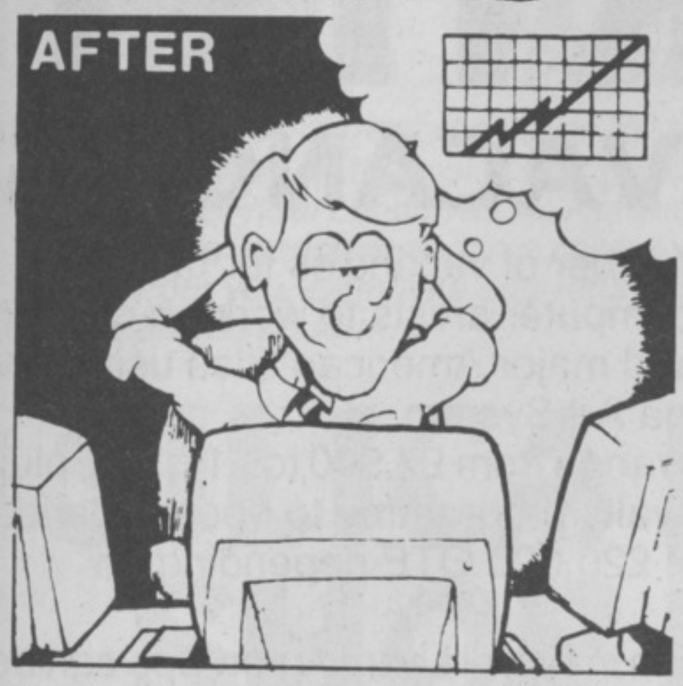
PROGRAMMERS REQUIRED

Successful expanding software company with a solid commercial reputation require freelance 'C' programmers for business/productivity development. Building on an established best selling range of low cost serious software, you must be able to design, code and document well structured 'C' and be willing to work to our 'house' style. Knowledge of windowing environments, such as GEM, Intuition and Windows would be an advantage. Graphic artists also required.

Interested? Telephone 0395 270273 now!

Digita International Ltd,
Black Horse House,
Exmouth, Devon,
EX8 1JL
Facsimile 0395 268893

PROGRAMMERS



SICK OF LONG HOURS FOR NO EXTRA MONEY?

At Enigma we have a system whereby the faster you can write quality code the more money we pay! We are looking for dedicated people who want to earn a living at coding, not play games. The money is waiting, the work is waiting

all it needs is you!!

RING MARK OR RICHARD NOW

ENIGMA VARIATIONS

13 North Park Road, Harrogate HG1 5PD
0423 - 501595, FAX 0423 - 500291

PALACE SOFTWARE

Palace Software is a division of the Palace film and video organisation. We are a publisher of high quality computer games, and are looking for key technical personnel to work in our central London offices.

Our current projects are exciting and innovative and you will work in a team environment with some of the best designers, artists and musicians in the business. We are looking for highly motivated and committed individuals with a disciplined approach to work.

TECHNICAL MANAGER

A technically-minded person is required to help oversee the development of high quality leisure products. You should be an ex-programmer, with practical working knowledge of 8 bit and 16 bit programming techniques. Some project management experience is desirable.

PROGRAMMERS

Experienced programmers are required to work on a variety of creative projects in an in-house team environment. You will have a proven track record of published work. A thorough working knowledge of 68000 and C would be ideal but significant experience on other games computers could be taken into consideration.

Please contact either:
Patricia Mitchell on 01-278 0751
Simon Birrell on 01-278 5037

or send your C.V. to
Palace Software,
The Old Forge, 7 Caledonian Road, London N1 9DX

★ URGENT ★ PROGRAMMERS WANTED

Dynamite Designs urgently seek programmers who are familiar with 8 Bit and 16 Bit environments - to work on conversions and project work.
We seek programmers for Spectrum, Commodore, Amstrad, ST and Amiga.

If you are interested, please get in touch with Jim Scott on the number below:

Dynamite Designs,
19 Oaks Drive, Higham Ferrers,
North Hants NN9 8EX
Tel: 0933 57998

Consult Software Limited

Consult Software Ltd. producers of "Return of the Jedi", "Vidicators" and "Dragon Spirit" require EXPERIENCED programmers coding in Z80/8086/6502/68000 to join our existing in-house team. If you can write quality games within a deadline then we want to hear from you!

Send C.V. and samples of your previous work to:

Glenn Benson
Consult Software Ltd
35/36 Hamilton Square
Birkenhead
Merseyside
L41 5BP

Or call Glenn on 051-647 3895

ARTIST
JOB VACANCIES

There are a number of vacancies for talented, experienced computer artists to work on coin-op conversions and major American titles using an in-house Amiga Art System.
Basic salaries range from £7,500 to £11,500, plus a generous royalty programme to boost salaries to in excess of £20,000 OTE depending on productivity.
Accommodation in Royal Leamington Spa can be arranged.
Send some examples of your best work to **David Darling** or **Tim Miller** at:

CodeMasters Software Co.
Lower Farmhouse
Stoneythorpe
SOUTHAM
Warwickshire
CV33 ODL.

Phone (0926) 814132, Fax (0926) 817595
PREVIOUS APPLICANTS ARE WELCOME TO RE-APPLY

PROGRAMMERS

We are looking for talented people to join our successful team in SWITZERLAND!

A good knowledge of machine code in either Z80, 6502, 8086, or 68000 is required.

WE ARE WAITING FOR YOU!

If you think you've got what it takes then contact Mark Grimmer.

Oh! Not to forget, we will pay your flight to the Swiss mountains....

LINEL

LINEL,
Guetlistrasse, 9050 Appenzell,
Switzerland.
Tel: 01041 71 87 49 19
Fax: 01041 71 87 49 21

URGENT Hang On for Sega wanted Andy 0283 760783 eves. Other games considered.

SWAP rare Bowie and Michael Jackson autographed 10 x 8 photos for Atari STE stuff, (Printer, Monitor, disk drive, etc,) Paul 38 Bolan Sqaure, Lochgelly, Fife KY5 9NF.

WANTED Slogger RX unit for Electron. Disc drive support metalwork your offers? Call Ralph 0785 714535 after 6.30pm. Or 021 522 2000 daytime.

ATARI SM124 Mono monitor wanted will pay up to £50 for good condition. Will pick up West Yorkshire. Call Steve on (0535) 2735) 273810, Evenings only.

WANTED for Tandy 1000EX: 3.5-inch disk drive: phone Chester (0244) 312145.

WANTED Games console plus games cartridges. Good prices paid Tel: 0704-79023 (Merseyside). Will collect 50 mile radius.

WANTED good working colour monitor for Amiga. Swap Hi-Soft, DEVPAC 1, Power Basic, depending on condition must deliver. Mr Moodie, 990 Gartloch Rd, Garthamlock, Glasgow G33 5AN.

WANTED Urgently CBM MPS 803 printer manual please phone with asking price . Someone must have one Tel: Plymouth 786710 (Evenings) 772312x319 (daytime) please.

SWAP my 520 STFM Power Pack for your STE. Ring Chas (0284) 752278.

WANTED any SEGA or Nintendo cartridges cash waiting or swaps please ring Bill 0706 875941.

● USER GROUPS

TURBO, a Fanzine and PD library for SAM COUPE. Includes interviews with MGT, reviews, news, tips and more. S.A.E. to A. Betts, 8 Healey, Lakeside, Tamworth, B77 2RF.

ARCHIMEDES user group required or pen pal for programing, hints: Contact 79, Lundy Road, Longton, Stoke On Trent, Staffs, ST3 2EA. 100% Reply.

LATEST progs free. Send disks to 82A Vaughan Gardens, Ilford, Essex, IG1 3PD.

BEST group in Britain needs more contacts world wide. Write to 28 Bushey Road, Plaistow, London, E13 9EN or Ring 01- 472 2673 after 7pm.

DOES anyone know of a user group in the Hemel, Watford, St Albians or Luton area or are interested in setting one up for ST's. Ring Steve on 0442 215102.

BLAST! is out now with news, reviews, competitions and a free software exchange club. For more details write now: 17 Sacombe Road, Hemel Hempstead, Herts, HP1 3RF.

AMIGA contacts wanted, any groups need utilities coding? Then get in touch. Write to Matt, 33 Brookhouse Hill, Fulwood, Sheffield. Or phone 0742 306848.

AMIGA contacts wanted to swap stuff. Marky Stuart, 15 Northcote Avenue, Aberdeen, AB1 7TD. Send disks and list please. 100% reply.

AMIGA contacts wanted for all new and latest stuff. Lamers accepted. Steven Carlin, 3A Laund Hill, Belper Derbys, DE5 1FH. Tel 0773 821909. Send disks and lists now!.

● PEN PALS

AMIGA contacts wanted, graphic artists, swappers send disks 100% return. Must be fast and reliable. Allan 26 Ammerston Road, Middlesbrough Cleveland TS1 5LL.

DRAGON 32 contacts wanted, into MK and Basic and games. Want to write a M/C game? Also help given. 01- 890 6337.

ACORN electron contacts wanted to swap ideas, programs 100% reply write to: Darren Worley, 24 Weatherby, Dunstable Beds LV6 1TW.

PC contacts wanted? Write to B Guy, 8 Berrylands, Orpington, Kent BR6 9TF.

AMIGA contacts wanted, worldwide 100% reply no lamers. Send disks, lists to John, 22 Convent Street, Castleisland, Co Kerry Eire.

AMIGA owners wanted to swap old and new stuff. Disks(s) ensure reply. Write to Craig Thornton, 10 Dalderby Crescent, Nettleham, Lincoln, LN2 2QB.

AMIGA contacts wanted to swap the latest. Overseas welcome send your disks or letters to Shane, 11 Cadge Road, Norwich, Norfolk NR5 8AT.

ST contacts wanted to swap games, tips etc 100% reply. Write to Chris, 12 Valerie Close, Fazakerey, Liverpool 10 4XS.

AMIGA contacts wanted fast. Send disks/lists for a 100% reply to Patrick Hickey, 3 Church Hill, Edinburgh EH10 4BG.

AMIGA contacts required, write to AXX, AT 38 Westacre Gardens, Yardley, Birmingham B33 8RE.

EXTREMELY lonely male, computer maniac seeks similar female with messy hand writing for relationship. Call me, Dan on 0536 723610 must be Kettering area, Cheers.

AMIGA contacts wanted for latest stuff, 100% reply. Send discs to Patrick, 92 Lennox Road, Portsmouth, Todmorden Lancs OL14 8QD Phone 0706 815467 after 4pm.

AMIGA contacts wanted must be hot, fast and reliable. Write to JSL 54 Paddocks Lane, Cheltenham, Glos GL50 4NX. Forget it lamers! Hi Guyz!!

AMIGA contacts. P.O Box, 1025 QLD, Australia 4012. Write now.

ST contacts desperately wanted! Definate 100% reply. Send games list (if possible). Write to Stephen Dang, 6 Bridge Close, Burgess Hill, W Sussex RH15 8PD.

AMIGA contacts for both serious and games software. Write to Robert, 43 Ethersall Road, Nelson Lancs BB9 QRP With list or phone me on 0282 691005.

ST contacts wanted, LSD or Medway etc? If so then write now. Guaranteed 100% reply. Write to Mark Anderson, Churchills Hall, The Schools, Shrewsbury Salop. SY3 7AT.

AMIGA contacts wanted. Write to Steve, 12 Ashwell Road, Bury, St Edmunds, Suffolk. Also disc of virus killers, 47 programmes, killing all known viruses £2.50.

AMIGA contacts wanted, forget the rest. Send lists, disks to J Auld, Homelea Church Road, Derry Hill, Wilts SN11 9NR. World wide or local 100% reply.

AMIGA contacts to swap software, hints etc. 100% reply, disks etc to Stephenson, The Nest, Llanaber Road, Llanaber, Barmouth, Gwynedd.

AMIGA contacts wanted fast reliable. Especially from groups. All welcome. Gar 31 Foster Street, Brotton, Saltburn Cleveland. TS12 2TR. Disks get priority all letters answered.

ST contacts wanted if into Midi, DTP and utilities 100% reply no gamers. Write to Jim, The Caravan, Four Winds, Lower Moor, ST Davids, Haverfordwest, Wales .

PC contacts wanted 100% reply, write to B Guy, 8 Berrylands, Orpington, Kent BR6 9TF.

AMIGA owner looking for contacts in the UK. Reply to Ian at 211 Verity Crescent, Canford Heath, Poole, Dorset BH17 7UA beginners and lamers welcome.

AMIGA contacts wanted to swap latest stuff. 101% reply (preferably in Ireland) Send disks, lists to Paul. 17 Beech Park, Viewmount, Waterford, Ireland. Very fast replies.

WANTED reliable Amiga contacts to swap games, utilities etc. Please write or phone Mark on 01- 398 5167 or write to 54 Grove Way, Esher, Surrey KT10 8HN.

HAVE YOU GOT WHAT IT TAKES TO

JOIN US AT THE TOP

ST & AMIGA TECHNICAL STAFF

Silica Shop Ltd are looking for ambitious, technically minded computer users to join our industry renowned technical department, based in Sidcup, Kent.

If you know Atari and Commodore systems, if you are a good communicator and want a varied job, then we can provide you with the kind of opportunities that very few companies can offer.

You will evaluate the very latest software, hardware and computers from Atari and Commodore. This includes PC's and Unix systems, high end Amiga and ST systems, as well as portables like the Portfolio and Stacy. In short, everything from the older 8-bit computers to state of the art transputer systems.

You will use your knowledge and experience to provide end user support to over a third of the UK's ST and Amiga owners. In addition you will provide advice to our Sales, Purchasing and Marketing teams.

Silica have been established for 10 years and with a turnover of over £10 million are the undisputed leaders in the Atari and Commodore market. We provide our staff with all the benefits associated with a large company. These include a subsidised staff restaurant, BUPA membership, air conditioned offices and a relaxed working atmosphere. And, of course, a discount purchase scheme for any of the 3,000 products we stock!

OTHER VACANCIES

As well as our current vacancies for technical support staff, we are always on the lookout for good people to work in our shops in Central London as well as in our main offices in Sidcup. If you are interested in a career with Silica, we'd like to hear from you. Complete and return the coupon below for a job application form.

SILICA SHOP

To: DAVID WEST, Silica Shop, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND ME A

JOB APPLICATION FORM

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

.....

.....

NCE ..... Postcode: .....

PLACE AN AD

FREE!

Selling an old computer?
Need some help?
Got any tips?
Run a bulletin board?
In charge of a consumer group?
After a second-hand bargain?

● You've come to the right place. Just fill in the form to place a free classified advertisement in Shopping Express

● Send your reader ad to:
Reader Ads Department
New Computer Express
30 Monmouth Street,
Bath BA1 2AP

READER ADS ORDER FORM

PLEASE TICK THE CATEGORY YOU WANT YOUR AD TO GO IN:

☐ HELP OFFERED	☐ GOODS WANTED	☐ USER GROUPS	☐ BULLETIN BOARDS
☐ BUGS DISCOVERED	☐ EVENTS	☐ SERVICES	☐ VIRUS WARNIG
☐ ANNOUNCEMENTS	☐ MINI-TIPS	☐ FOR SALE	☐ PERSONAL

NAME _____

ADDRESS _____

_____

_____

TEL: _____

Terms and conditions

■ Sorry, NO trade ads. All reader ads must be from private individuals
■ We cannot vouch for the quality of goods and/or services offered in this section. all ads are accepted in good faith.
■ We reserve the right to amend or refuse reader ads at our discretion
■ No pirated software may be sold through these columns. Any reader being offered non-originals should contact us
■ We cannot guarantee that reader ads will appear in particular issues of Express
■ The following declaration should be signed:

My advertisement conforms to the terms above and is legal, decent, honest and truthful

Signed

_____

YOUR ONE STOP SHOP

MORE SOFTWARE THAN YOU CAN HANDLE!
MORE HARDWARE THAN YOU CAN USE!

Software SUPERSTORE

AMIGA 512K MEMORY EXPANSION

* Brings your Amiga up to 1 Meg in seconds.
* Enable/disable switch. Now you can run ALL software.
* Easy to fit - no technical knowledge needed.
* Reliable, fast, high quality chips on a robust through plated P.C.B. Do not confuse with cheaper, inferior products.
* DOES NOT INVALIDATE GUARANTEE.

ONLY £69.99

ONLY £79.99 FOR VERSION WITH CLOCK/CALENDAR

AMIGA 3.5" 2nd DRIVE ONLY £79.99

* DISABLE SWITCH
* THROUGH PORT
* SLIM SIZE
* LOW POWER CONSUMPTION
* HIGHLY RELIABLE
* EXCELLENT R/W PERFORMANCE

ST 2nd DRIVES

ALSO AVAILABLE PLEASE ASK FOR DETAILS

WE STOCK MOST DATEL PRODUCTS

AMIGA A500 BATMAN PACK

ALMOST HALF PRICE

	R.R.P.
A500	£399.99
TV MODULATOR	24.99
BATMAN (THE MOVIE)	24.99
NEWZEALAND STORY	24.99
DELUXE PAINT II	49.99
INTERCEPTOR	29.99
TEN STAR PACK	229.50
TOTAL R.R.P.	£784.44
LESS DISCOUNT	£384.45

OUR PRICE..... £399.99

*OR £15 MONTHLY

SEGA

WE STOCK A VAST RANGE OF ALL THE VERY LATEST TITLES

Access VISA

Licensed Credit Broker

*(subject to status) Written details on request.

CALLERS ONLY

10 BLANK 3.5" DSDD DISKS NCE 1
CERTIFIED 100% ERROR FREE
IN A **LOCKABLE STORAGE BOX**
COMPLETE WITH LABELS (BOX HOLDS 40 DISKS)

ONLY £9.99

WHEN YOU BRING THIS VOUCHER TO ANY OF OUR STORES. BUT HURRY STOCKS ARE LIMITED SO ONLY ONE VOUCHER PER CUSTOMER SUBJECT TO AVAILABILITY.
VOUCHER VALID UNTIL 8/3/90

1 MEG AMIGA :-

as above plus half meg upgrade, mouse, mat, mouse holder, lockable disk storage case, dust cover and 10 disks

OUR PRICE

ONLY £499.99

*OR £19 MONTHLY

1 YEAR ON-SITE MAINTENANCE ONLY £10 EXTRA ON ANY PRINTER

MAIL ORDER:- Carriage at Cost

ORDER HOTLINE (MON to FRI)
(0782) 202269
ADVICE HOTLINE (0782) 268620
for FAST & FRIENDLY SERVICE

PRINTERS

STAR LC10

Acclaimed "Best Buy" budget printer. Now massively under-priced at just

£169.99 *OR £8 MONTHLY

STAR LC10 Colour

The perfect printer for every Amiga. Colour output from all the better art packages - or just slot in a black ribbon for word processing. Cheap to run too. Very affordable

£229.99 *OR £9 MONTHLY

STAR LC24 - 10

24 Pin quality at a price you can afford. 8 Fonts, 3 print variations, paper parking, 170 CPS draft, 57 CPS LQ

£259.99 *OR £10 MONTHLY

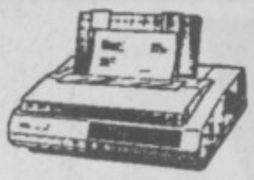
FREE Cable with every Printer

STOKE-0N-TRENT
11 Market Square Arcade, Hanley Stoke-on-Trent
Manager: Wayne Tel: 0782 268620 Open 6 Days

SHEFFIELD
6 Waingate, Sheffield
Manager: Tony
Tel: 0742 721906
Open 6 days

ST HELENS
27 Baldwin Street, St Helens
Manager: Adrian
Tel: 0744 27941
Closed Thursday

STOCKPORT
6 Mealhouse Brow, (Off Little Underbank), Stockport. Manager: Ray
Tel: 061 480 2693
Closed Thursday



ULTIMATE BUSINESS MACHINES

IF YOU THINK YOU HAVE TRIED THE BEST..TRY THE ULTIMATE
OPEN MON-FRI 9 TILL 6 SATURDAY 9 TILL 1

AMSTRAD

MODEL	MON	COL	EGA	
PCW8256	318			
PCW8512	399			
PCW9512	424			
PC1512SD	364	438		
PC1512DD	438	514		
PC1512HD	559	636		
PC1640SD	458	544	628	
PC1640DD	518	597	682	
PC1640HD	688	778	858	

SOFT-INC	MON	COL	12"	14"
PC2086SD	538	618	699	786
PC2086DD	598	679	768	849
PC2086HD	765	851	936	1021

On-Site-Warranty £30 for above
Below inc Maintenance

PC1286SD	750	835	920	1005
PC2286DD	851	936	1021	1106
PC2286HD	1021	1106	1191	1276
PC1386SD	1180	1265	1351	1436
PC2386HD	1702	1787	1872	1957

OLIVETTI

The new Olivetti PCS Range offers unbeatable performance at an incredibley low price. We feel that the PCS range offers you the customer a better deal than is presently on offer from any other manufacturer.
8086 compatable running at 10Mhz, 640K ram expandable to 2.5Mb on motherboard 3 full size slots and on-site-warranty makes this the deal of the 90's

MODEL	MON	COL
PCS86SD	562	719
PCS86DD	630	803
PCS86HD	803	976
PCS286DD	889	1062
PCS286HD20	990	1149
PCS286HD40	1062	1235

All PCS have VGA Monitors

COMMODORE

NEW RANGE

MODEL	MON	COL	MON VGA	COL VGA
PC10SD	499	649	669	759
PC10DD	564	699	726	819
PC20HD	699	829	726	964
AT80286				
PC30HD			1022	1167
PC40HD40			1399	1599
PC40HD-T			1699	1899
PC50HD			Call	Call
PC60HD			Call	Call

All Commodores come with 12 Months on site warranty

SCHNEIDER

MODEL	MON	COL	ON-SITE
EURO PC	375	525	Included
5.25" Ext D/Drive	99		
3.5" Ext D/Drive	119		

HYUNDAI

MODEL	MON	COL	EGA	VGA
XT-S/D	399	549	699	759
XT-D/D	469	609	759	819
XT-HD20	599	749	899	959
XT-HD30	619	769	919	979

All Above have 640K Ram
5 slots 102 Keyboard 10Mhz processor MSDos 3.3 GWBasic 5.25" 360K Floppy.
For 3.5" 720K Floppy ADD £30

12 Months on site = £35

PORTABLE

LT3 AT 1MB RAM 20MB	1399

SHARP

PORTABLES

4602 DUAL DISK XT	863
4641 40MB XT	1463
5541 40MB AT VGA	2330

SAMSUNG

MODEL	MON	COL	EGA	VGA
PC/XT				
3001 SD	479	629	799	899
3001 DD	549	699	869	969
3001 HD20	679	829	999	1099
3001 HD30	699	849	1019	1119
AT80286 10Mhz 640K RAM				
6001 SD	879	1029	1199	1299
6001 DD	949	1099	1269	1369
6001HD20	1079	1229	1399	1599
6001HD30	1099	1249	1419	1619
AT80286 12Mhz 1MB RAM VGA				
6512 SD	1099	1249		
6512 DD	1169	1319		
6512HD20	1299	1449		
6512HD40	1349	1499		
AT80386 20Mhz 2MB RAM				
S800DD	1699	1859	1899	

All Samsung Computers and Monitors have 12 months On-Site-Maintenance included

STAR

MODEL	SPEED	PRICE
9 PIN DOT MATRIX		
LC10	144/36	* 127
LC10-II	180/50	* 150
LC10-Colour	144/36	* 164
LC15	180/45	* 254
FR10	300/76	* 289
FR15	300/76	* 379
24PIN DOT MATRIX		
LC24-10	200/67	* 194
LC24-15	200/67	* 324
XB24-10	240/80	* 375
XB24-15	240/80	* 495
LASER PRINTERS		
LASER 8	8PPM	* 1198
LASER 8 D	8PPM	* 1685

CONSUMABLES

RIBBONS	MONO	COLOUR
LC10	3.50	5.50
LC24-10/15	4.50	
FR/XB10/15	6.00	12.00

PANASONIC

MODEL	SPEED	PRICE
9 PIN DOT MATRIX		
KXP1081	144/28	* 123
KXP1180	192/36	* 149
KXP1592	216/45	* 254
KXP1595	288/65	* 314
24 PIN DOT MATRIX		
KXP1124	192/63	* 225
KXP1540	288/65	* 405
LASER PRINTERS		
KXP4450	11PPM	* 1169
ACCESSORIES		

	RIBBONS	S/FEED
KXP1081	5.80	
KXP1180	5.80	70
KXP1592	5.80	161
KXP1595	5.80	161
KXP1124	5.80	80
KXP1540	6.90	161

CITIZEN

MODEL	SPEED	PRICE
9 PIN DOT MATRIX		
120D PAR	120/25	* 107
120D SER	120/25	* 124
120D COM	120/25	* 139
180E PAR	173/30	* 128
180E SER	173/30	* 154
PRODOT 9		* 279
SWIFT 24 PIN	160/60	* 245

MANNESMAN

MT81	120/25	* 104

HYUNDAI

HY910 10"	216/37	* 135
HY920 15"	216/37	* 199

H P

MODEL	PRICE
THINKJET	* 254
QUITEJET	* 334
QUITEJET +	* 398
DESKJET	* 434
DESKJET +	* 519
PAINTJET	* 644
RUGGED WRITER	* 849
HP LASERS	
LASERJET IIP	* 879
LASERJET II	* 1248
LASERJET IID	* 1879

AKHTER

ACL135	135/27	* 119
ACL480 10"	480/55	* 299
ACL700 15"	480/55	* 399

EPSON

MODEL	SPEED	PRICE
LX400	180/30	130
LX850	240/48	199
FX850	264/54	329
FX1050	240/48	393
EX800	300/60	459
EX1000	300/60	599
DFX5000	533/400	1139
LQ400	180/60	209
LQ550	180/60	279
LQ860	290/88	499
LQ1050	264/88	589
LQ1060	290/88	639
LQ2550	400/133	899
TLQ4800	250/83	1499
SQ850	600/198	499
SQ2550	600/198	863
GQ5000	LASER	* 939

PRINTERS = * INCLUDE ON-SITE-MAINTENANCE

A1 PLOTTER

HITACHI 674-DR
Floor standing A4/A1 4 pen plotter, HP7580B compatable
128K buffed RS232 interface
re-plot facility, Auto pen capping
Zoom-up/down facility
400mm/sec 0.025 resolution
61 built-in character sets
LCD menu driven display
12 Months on-site-replacement
optional 1MB buffer upgrade

£2999

A3 PLOTTER

HITACHI 681-XA
Desk top A4/A3 4 pen plotter
HP7475A compatable
400mm/sec speed
RS232/Parallel Interface
19 Built in character sets
8K buffer
0.025" resolution
Soft pen landing (Quiet)
Weight = 6.5Kg

£599

CANON

MODEL		PRICE
LASERS		
LBP4	4PPM	* 869
LBP8-III	8PPM	* 1359
LBP8-IIIT	8PPM	* 1764
LBP8-IIIR	8PPM	* 1909
SCANNERS		
IX-12 ROLLERBED		374
IX-12F FLATBED		665
IX-31F INTERFACE		99
OCR SOFTWARE		304
BUBBLEJETS		
BJ-130		528

DISK DRIVES

3.5" 720K	INTERNAL	59
3.5" 1.44MB	INTERNAL	69
5.25" 360K	INTERNAL	39
5.25" 1.2MB	INTERNAL	59
3.5" 720K	EXTERNAL	135
5.25" 360K	EXTERNAL	69
5.25" 1.2MB	EXTERNAL	95
40MB TAPE STREAMER		249
32MB HARDCARD 40MS		199
AMIGA 2ND DRIVE 3.5"		65
ATARI 2ND DRIVE 3.5"		73
AMIGA/ATARI 42MB H/D		399

MONITORS

MONOCROME	
PHILIPS 7513 12"GRN	71
MITSUBUSHI 12" GRN	65
CGA	
PHILIPS 8833 14"	199
EGA	
ECM 5400 14"	249
VGA MONO	
SAMSUNG 2611	85
VGA COLOUR	
ECM 5413 14"	259
MULTI-SYNC	
MTS 9600 14"	309

W/P

GEM 1ST WORD + V2	134
LOTUS MANUSCRIPT	269
MULTIMATE ADVANTAGEII	259
PROF WRITEV2.1	169
SMART WP inc Spellcheck	150
SMARTWARE II WP	150
BORLAND SPRINT	120
TURBO LIGHTNING	39
SUPERWRITER	117
WORD V5	259
WORDCRAFT V6	261
WORDPERFECT V5.1	255
WORDSTAR PROF V5.5	189
WORDSTAR 2000 + R3	245

NOVELL

ELS I 4 USER V2.0A	359
ELS II 8 USER V2.15	920
ADVANCED V2.15	1660
SFT V2.15	2596
NETWARE 386 V3	4020
NE1000 COMPAT CARD	139
CALL FOR FURTHER INFORMATION	

DATABASE

ASPECT	377
CARDBOX PLUS V4	236
PERSONAL CARDBOX +	93
CLIPPER	305
DATAEASE V4	417
DATAFLEX DEV	399
DATAFLEX R/T	155
DATAPERFECT	280
dBASE IV	320
dBASE IV DEV	499
dBXL V1.3	179
DELTA 5	365
FOXBASE PLUS V2.1	257
FOXPRO V1	387
PARADOX 3	357
PARADOX 2	270
RETRIEVE III	99
RETRIEVE IV	209
SMART DATA MANAGER	270
SMARTWARE II DATA MAN	270
SUPER dB	170

SPREADSHEET

EXCEL V2.1	257
HAL	90
INWORD	46
LOTUS 1-2-3 REL 3	259
MULTIPLAN V4	98
PC PLANNER	129
PFS PROF PLAN	126
PLAN PERFECT V5	168
QUATTRO V1	60
SIDEWAYS	35
SILVERADO FOR 123	125
SMART SPREADSHEET	195
SMARTWARE II SPREAD	225
SUPERCALC 5	238

COMMS

SAGE CHIT-CHAT	69
CROSSTALK XVI	69
DATATALK	80
MIRROR III (UK)	130
MODEMS	
AMSTRAD MC2400 INT	129
AKHTER 2400 AUTO INT	119

DTP/GRAPHS

TIMEWORKS	69
BYLINE	126
db PUBLISHER	275
FINESSE V2	97
GEM ARTLINE	334
GEM DTP V2	233
GEM SCAN V1.1	67
PAGE ABILITY	115
ALDUS PAGEMAKER 3	450
VENTURA 2	520
WORDCRAFT ELITE V4	519
OFFICE PUBLISHER	327
3B2 V2	780
CHART 3	163
CHART MASTER	127
CONCORDE V3	420
DRAW APPLAUSE	310
FREELANCE PLUS V3	265
GEM DRAW PLUS V2.01	134
GEM PRESENTATION V3.1	267
GRAPH WRITER	265
HARVARD GRAPHICS V2.1	217
SIGN MASTER	95

UTILITIES

AGENDA	220
CLAM	105
EUREKA	78
FASTBACK PLUS	95
IZE	195
MACE UTILS	53
MAGELLAN	69
NETWORKER PLUS	155
MENUGEN	40
METRO	55
NORTON UTILITIES	45
NORTON ADVANCED	67
NORTON COMMANDER	35
NORTON EDITOR	35
OFFICE WORKS	185
OVERDRIVE	41
PC TOOLS DELUXE V5.5	84
REFEREE	37
SIDEKICK PLUS	78
SIDEKICK	36
SUPERKEY	36
ULTRALOCK	128
XTREE V2	32
XTREE PRO	60

LANGUAGES

BASIC COMPILER V6	146
C COMPILER V5.1	202
COBOL COMPILER V3	358
FORTRAN COMPILER V5	202
MACRO ASSEMBLER V5.1	75
PASCAL COMPILER V4	137
QUICK BASIC V4.5	49
QUICK PASCAL	49
SORT V1.01	98
TURBO ASSEM-DEBUG	78
TURBO BASIC	36
TURBO BASIC DB TOOLS	36
TURBO BASIC ED-TOOLS	36
TURBO C PROF V2	120
TURBO C V2	60
TURBO PASCAL V5.5	60
TURBO PASCAL PROF V5.5	120
TURBO PASCAL DEV LIB	138
TURBO PASCAL DB T/BOX	36
TURBO PASCAL ED T/BOX	36
TURBO PASCAL GAMES	36
TURBO PASCAL GR/TBOX	36
TURBO PROLOG	60
TURBO PROLOG T/BOX	36

INTEGRATED

ABILITY	59
ABILITY PLUS	115
FIRST FRAMEWORK	56
FRAMEWORK III	325
LOGISTIX	115
OPEN ACCESS II PLUS	357
PFS FIRST CHOICE	76
SMART SYSTEM V3.1	350
SMARTWARE II SYSTEM	348
SYMPHONY V2	370
WORKS V1	94

ACCOUNTING

NEW SAGE STERLING RANGE	
BOOKEEPER	64
PAYROLL 2	129
JOB COSTING	129
ACCOUNTANT	162
ACCOUNTANT PLUS	259
FINANCIAL CONTROLLER	324

SPECIFY 3.5"/5.25"

SCOOP PURCHASE

COMPUTER, PRINTER & SOFTWARE BUNDLE
£299 + VAT

SANYO MBC 550 COMPUTER, MSDOS 2.11,12" AMBER MONITOR,135CPS DOT MATRIX PRINTER
WORDSTAR WORD PROCESSING AND CALCSTAR SPREADSHEET-HURRY WHILE STOCKS LAST

ULTIMATE BUSINESS MACHINES LTD
5 WATER STREET
EARBY
COLNE
LANCASHIRE BB8 6QP
TELEPHONE
(0282) 843001
VISA & ACCESS

DELIVERY CHARGES UK MAINLAND

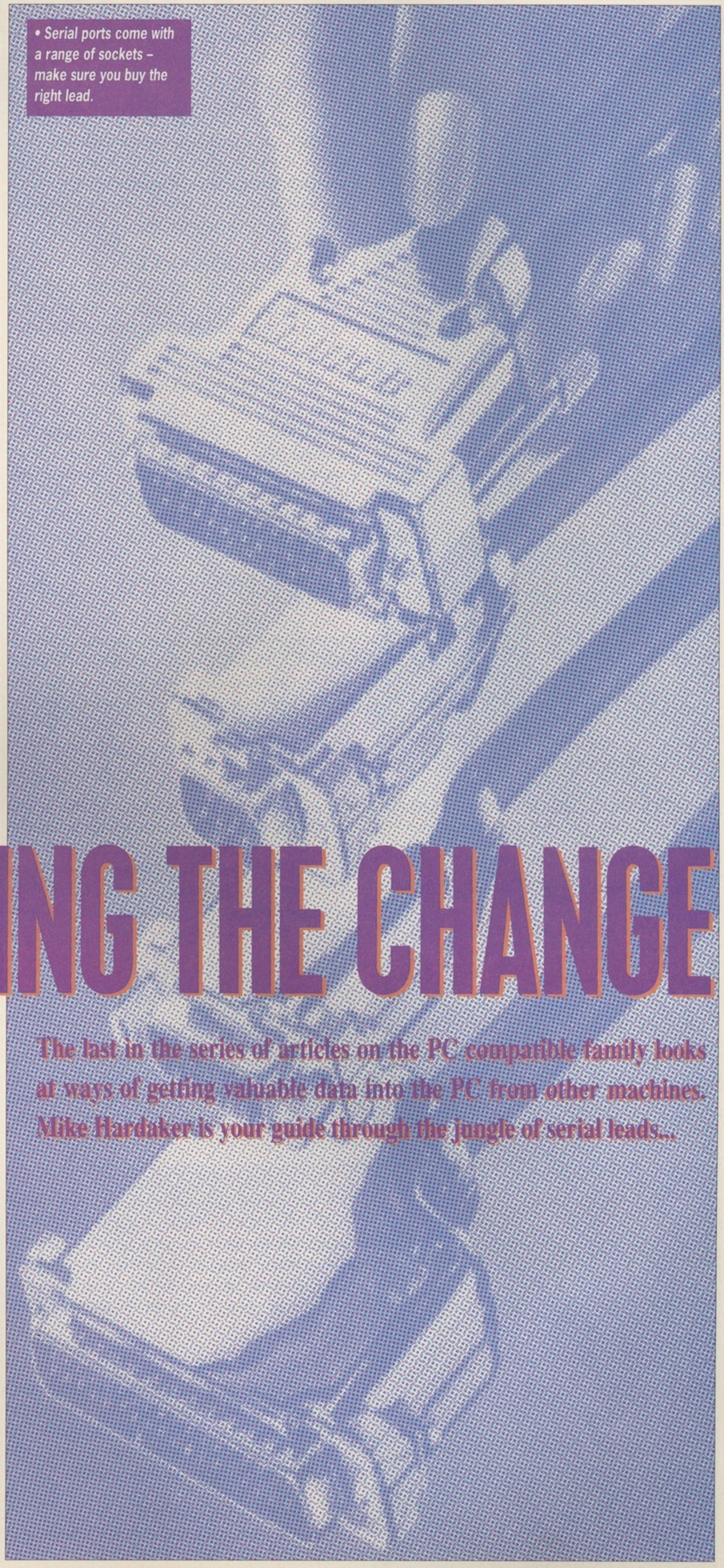
	NEXTDAY	4-DAY
HARDWARE	£15	£10 + VAT
SOFTWARE	£10	£ 8 + VAT
CONSUMABLES	£5	£ 3 + VAT

TERMS
All prices exclude VAT & Delivery charges.
Strict Cash with Order.
Visa/Access welcome.
Cheques made out to Ultimate Business Machines Ltd.
Official orders from Government, PLC's & Educational bodies accepted.

Callers welcome but by appointment only

MAKING THE CHANGE

The last in the series of articles on the PC compatible family looks at ways of getting valuable data into the PC from other machines. Mike Hardaker is your guide through the jungle of serial leads...



• Serial ports come with a range of sockets – make sure you buy the right lead.

When you decide to buy an IBM-compatible PC, one of the biggest problems can be working out how to get your all your lovely data into it – your letters, files, novels, catalogues and suchlike. You have hardware and software which can manipulate information in all sorts of clever ways, but if you can't get the data into the machine in the first place, you may as well have saved your money. After all, if a computer can't process information it's just an expensive piece of tin.

If you have never used a computer of any sort, all your data will be held on old technology media (or 'paper', as it used to be called). To get it in PC format, the simplest route is to re-type it. This can be pretty time-consuming if 10 years of card records or deathless prose need to be computerised, but the only obvious route out is to pay someone (a temping agency, say) to do the work for you. This takes you less time but costs a lot more – ultimately, the decision is yours.

If, on the other hand, your data is already held on a computer you can usually transfer it from that machine to your PC. One of the advantages of the PC's remarkable world-wide success is that methods exist for getting data to and from the PC from just about every sort of computer that has ever existed.

STANDARDS

It all comes down, once again, to standards. Throughout the computer world, the nearest there is to a hardware standard for data interchange is the RS232 port, also known as the serial interface. This is a socket on the back of most microcomputers (and an increasing number of larger machines). In theory, you should be able to plug a cable into both machines and then transfer your valuable information down it.

In practice, the RS232 port is such a vague standard, you have to be very careful about the design of your cable. The best thing to do is to tell your friendly neighbourhood dealer which machines you want to tie together and then get them to make you an appropriate cable – it shouldn't cost more than about £15.

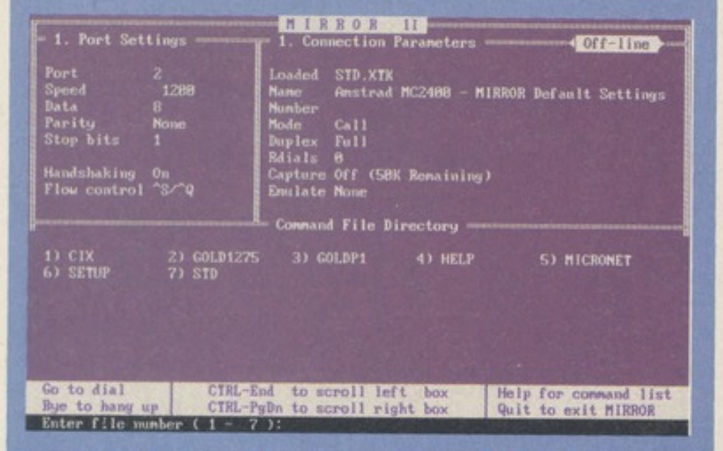
The software standard is ASCII (American Standard Code for Information Interchange), a series of 255 codes representing letters, numbers and things like carriage returns, which was described in *Express* 68. This is the lowest common denominator of micro files. It is unsophisticated – not allowing you to retain bold or italics, for example, but widely accepted in the computing fraternity.

In general, you can only transfer your data, not your programs. Each different computer uses different program instructions, and most of these are incompatible – so no, you can't get your favourite BBC word processor on to your IBM clone. However, some languages – such as BBC BASIC – are so common that versions exist for them on all sorts of computers. So yes, you can port all those schooldays listings onto the PC

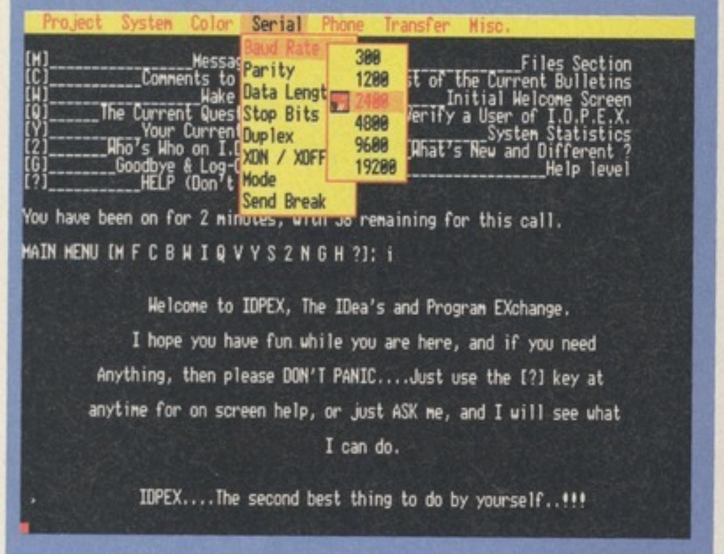
SOFTWARE

In principle, the PC can communicate with other machines without specialist software, courtesy of the MS-DOS `COPY` command. In fact, the process is so error-prone that it is best to shell out a few bob on some dedicated software. The PC standard is probably *Mirror* 2, from Softklone. However, the public ➤

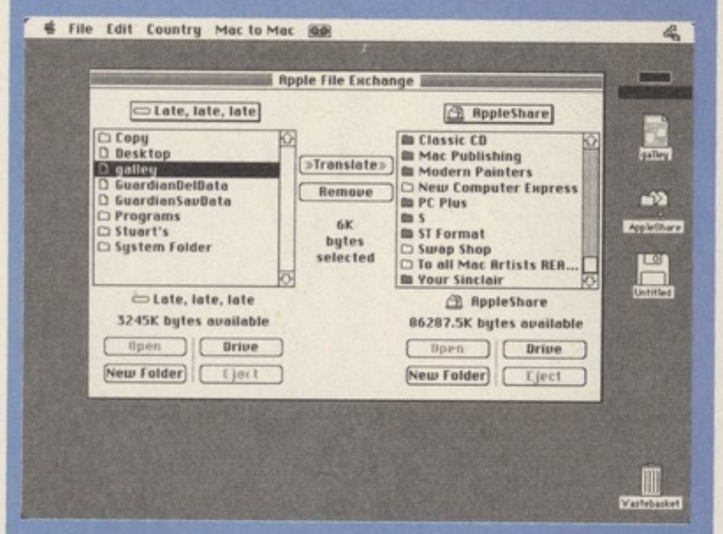
COMMUNICATIONS SOFTWARE



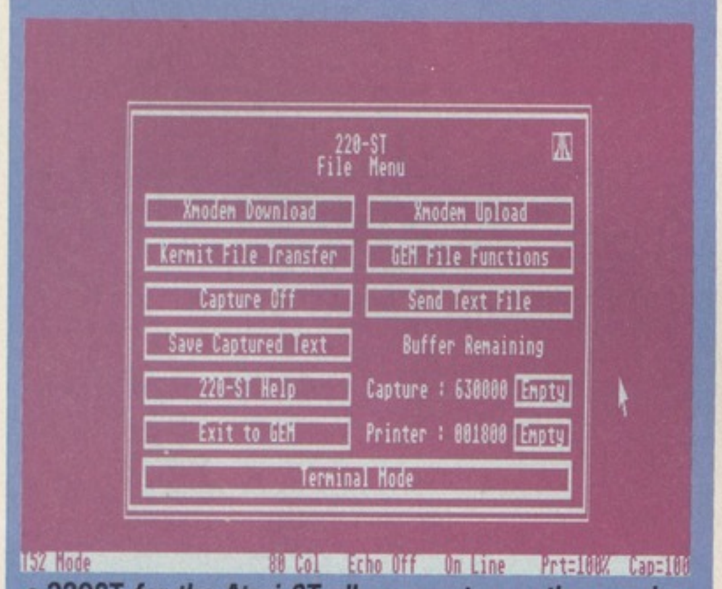
• Mirror 2 is probably the commonest PC file transfer program. It offers all the facilities you need for moving data between machines. Version 3 will be out soon. When choosing a program look for Kermit and X-modem compatibility.



• Access! is the best software file transfer package for the Amiga. It can be used for logging on to a bulletin board via a modem, or for direct file transfer with a serial cable.



• Modern Apple Macintoshes can read and write 3.5-inch PC disks with the aid of Apple File Exchange, free with every Mac. For serial file transfer, the shareware program Red Ryder offers all the facilities you need.



• 220ST for the Atari ST allows you to use the popular X-modem protocol, which permits rapid error-free file transfer. To use this option your PC software must be similarly blessed.

domain utility *Kermit* is something of a universal standard and the shareware program *ProComm Plus* is very highly regarded and pretty inexpensive. Get one of these and you won't go far wrong.

AMIGA

An RS232 port is built in to the Commodore Amiga. Use the *Access!* program from PD libraries as your preferred software. Alternatively, *CrossDos* from Power Computing allows you to read and write MS-DOS format 720K 3.5-inch disks on the Amiga's disk drive.

ATARI ST

The ST can already read and write PC format 3.5-inch 720K disks. Alternatively – if you have 5.25-inch disks – use the PD *Uniterm* package or a professional package such as *220ST* and an RS232 cable.

APPLE MACINTOSH

The SE/30 and the later Mac IIcx and IIci machines can read PC format disks, courtesy of the *Apple File Exchange* utility which comes on the system disk. Otherwise, you can use *Red Ryder* software or the more specialised *MacLink,* together with the omnipresent RS232 cable. Alternatively, a COPYIIPC Option Board fitted in a PC will allow it to read and write Mac format 3.5-inch disks. This is pricey, but handy if a lot of transfers are involved.

ACORN / BBC B

The Beeb's RS232 port is also non-standard, based in design on a DIN plug. It is there, however, and with an appropriate cable you can tie the thing up to a PC. The *CommStar* package (which is ROM-based) is recommended for the BBC, with the PC running the comms program of your choice.

AMSTRAD PCW

You need to buy an RS232 port for about £60, as it is non-standard on the PCW – look at the ads in *Express* or specialist magazines like *8000 Plus*. The *Setsio* program on the PCW's CP/M disks should provide all you need to get going. Alternatively, try *Dialup* (from PMS Communications) or the PD alternatives if you want more function than is bundled with CP/M.

AMSTRAD CPC

Like the PCW, you have to buy the RS232 interface – Pace, Amstrad and KDS are recommended suppliers and you should expect to spend less than £50. CP/M can do the software business here too. Siren Software is shortly expected to offer a £20 utility for the CPC which will allow it to read and write MS-DOS disks – although you will need an external 3.5-inch or 5.25-inch drive on your Amstrad.

SINCLAIR QL

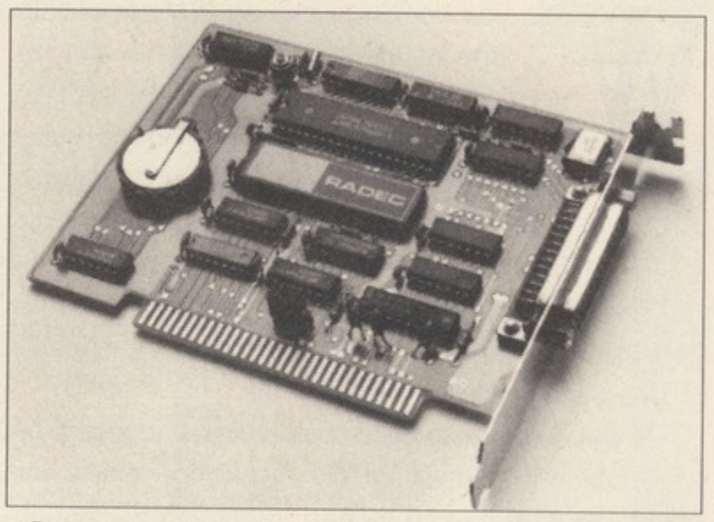
This has another non-standard RS232 port, using phone jacks this time – again, a special cable will be needed. The machine's operating system handles the communication – although *Qualsoft* is a more powerful communications package for the specialists who demand extra power. It's business as usual at the PC end of the wire.

SINCLAIR SPECTRUM

Interface 1 for the old Speccy includes an RS232 port, which is all the extra hardware you need. The Plus 2's hardware is much like the QL's, described above. For communications software, contact user groups or PD libraries for the latest information.

COMMODORE C64

Once again, you'll need to buy an RS232 interface (try Datel) for about £30. The C64 User Group is the probably the best place to try for the appropriate software – look for Kermit compatibility.



• Before you can use a serial cable you will need a serial port. Most PCs come with one, but you can add an RS-232 socket with a board like this one.

MSX

The MSX 2 can read and write 3.5-inch PC disks. Otherwise, you may or may not have to buy an RS232 interface (the Toshiba HX22 has one, other machines don't). You also may or may not have to get some software – try *Communications* for tape-based systems. Wasn't MSX supposed to be a standard?

ARCHIMEDES

PC owners who have 3.5-inch disks can use Acorn's *PC Emulator* on the Archimedes to read and write PC disks directly. If you have 5.25-inch disk drives on your PC, try Technomatic's *ArcComm* and the good ol' RS232 cable.

OTHER MACHINES

There are so many weird and wonderful micros out there, it is impossible to give notes on everything. If your old machine is still being made, ask the manufacturer what to do. If its an olden goldie, try your dealer, or otherwise look for user groups or bulletin board Special Interest Groups. If you're desperate, find someone who will regard it as an intellectual challenge to solve your problem.

THE BUREAU ALTERNATIVE

If you are ditching your old micro, you may find the cheapest way of getting your data on to a PC is to pay someone else to do the work – check out the adverts in *Express* or look in the Yellow Pages under 'Computer Services'. Although the deal may seem pricey, it could cost less than buying extra hardware and software for on-off transfer.

If you have previously been using a computer bureau to do your data processing, you may have an impressive-looking set of eight-inch disks or big spools of tape. If this is the case, you have no option but to consult a 'data migration' expert – it's Yellow Pages time again.

BULLETIN BOARDS

If you have a modem, you can always upload the data from your old machine to a bulletin board or conferencing facility (such as CIX). You can then sign on to the board with you PC attached and download the data again. This is probably the most straightforward method of getting your data from one machine to another. It's cheap, too – as long as you don't have to pay peak-rate phone bills.

DOING IT BY HAND

If you haven't got much data, haven't got much money, but you do have lots of time, then the cheapest way of getting your information from one micro to another is just to re-type it. It's boring, gives you sore wrists and takes up all your evenings, but it is cheap. ■

AT MICRONET WE'RE REALLY TALKING!

FREE MODEM *with annual subscription*

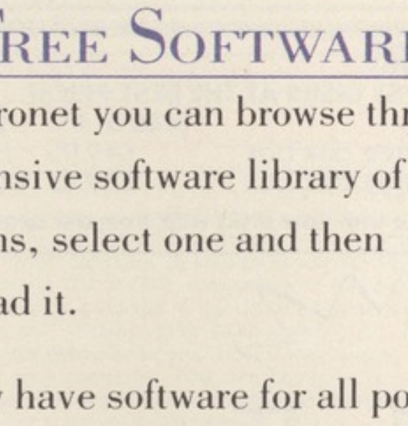
With Micronet you can turn your computer into a communications terminal that will download free software, access up-to-the minute computing information, play exciting multi-user games, talk to other people (and computers) and a lot more.

And if you pay for a year's subscription in advance we'll even give you a modem free when you join.

FREE SOFTWARE

On Micronet you can browse through an extensive software library of free programs, select one and then download it.

We now have software for all popular machines, from the Spectrum to PC compatibles, including the Atari ST and the Amiga.



INFORMATION

Micronet is also a computer magazine. Our computer news area is updated every day, so there's no better way to stay up-to-date, and our software reviews and features for all popular micros mean Micronet members are always better informed.

Add to this Prestel's massive database and you'll have all the facts at your fingertips.

ENTERTAINMENT

But Micronet is not just informative, it's also a lot of fun! As a member you'll have access to a range of games, including the UK's most popular multi-user game, Shades, where the action is live and so are your opponents!

FREE DEMONSTRATION

If you have access to a modem (1200/75 baud) and viewdata communications software you can see a free demonstration of Micronet. Just Dial 0272 250000 and use the ID 4444444444 and password 4444.

You can look up a local telephone number once on-line.

COMMUNICATIONS

And with Micronet you can use your computer to communicate with thousands of other users. From electronic mail, telex and fax to chatlines and teleconferencing, Micronet lets you do the talking.

LOW COST

A Micronet subscription, which includes Prestel, costs just £23 a quarter, and using Micronet starts at only 55p an hour including telephone charges! Wherever you are, Micronet is just a local phone call away.

Just phone our Sales Desk free on 0800 200 700 or clip the coupon today for a free brochure and details of how you can get a free modem.

Join Micronet, and get talking!

Return to: Micronet, Units 8/10,
Oxgate Centre, Oxgate Lane, London NW2 7JA

Name: _____

Address: _____

_____ Age: ____

Tel. No.: _____

Machine Type: _____

NCE 22

MICRONET

Free modem offer available in the UK only to new members while stocks last. Minimum subscription period 1 year.

SALE ★ SALE ★ SALE ★ SALE

MEGA DISCOUNT!

THE BEST QUALITY 5 1/4" DISKS EVER SOLD BY US - NOW EVEN LOWER PRICES!

5.25" Disk and Box Offers

10	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box	**£9.95**
30	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box	**£13.95**
50	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box	**£16.95**
70	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box	**£22.95**
90	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box	**£27.75**
100	5 1/4" Double Sided Double Density 96TPI Disks with FREE storage box	**£29.95**

You can choose any size or type of disk box to go with your disks completely FREE!

All our disks are 100% certified and error free. Each disk comes with user labels and comes with our lifetime guarantee

NOW EVEN LOWER PRICES ON OUR TOP SELLING LINES!

3.5" Disk and Box Offers

20	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£16.95**
30	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£19.95**
40	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£25.95**
50	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£29.95**
60	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£34.95**
70	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£39.95**
80	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£44.95**
90	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£49.95**
100	3 1/2" Double Sided Double Density Top Quality Disks with FREE Storage Box	**£54.95**

You can choose any size or type of disk box to go with your top quality disks completely FREE! All our disks come complete with labels and our lifetime replacement guarantee.

THE HIGH DENSITY DISK AND BOX OFFER!

ALL DISKS SUPPLIED ARE TOP QUALITY, 100% ERROR FREE AND SUPPLIED WITH LABELS. THE BEST DISKS AT THE BEST PRICE!

QTY	DESCRIPTION	SIZE 5 1/4"	3 1/2"	QTY	DESCRIPTION	SIZE 5 1/4"	3 1/2"
10	High density disks with free disk box	£13.95	£17.95	75	High density disks with free disk box	£49.95	£74.95
25	High density disks with free disk box	£19.95	£34.95	100	High density disks with free disk box	£59.95	£109.95
50	High density disks with free disk box	£34.95	£59.95				

You can choose any storage box to go with your disks FREE from our large range

BRANDED 3 1/2 DISKS

3M
SONY
VERBATIM
KODAK
DYSAN

ONLY £12.95 PER BOX OF 10

WE ALSO SUPPLY PRINTER RIBBONS P.O.A

NO MIN ORDER

DISK STORAGE BOXES

3 1/2" 10 Capacity*	£2.49
3 1/2" 40 Capacity	£5.95
3 1/2" 80 Capacity	£7.95
5 1/4" 10 Capacity*	£2.49
5 1/4" 60 Capacity	£6.25
5 1/4" 80 Capacity*	£6.95
5 1/4"100 Capacity	£7.49
5 1/4" 120 Capacity	£7.95

ALL BOXES COME WITH KEYS AND DIVIDERS EXCEPT *

BARGAINS

5 1/4x80 Cap non lock disk box	£6.59
5 1/4x10 Cap library case	£1.15
Atari ST replacement mice with mat and bracket	£24.95
10 Cap disk rack with desk tidy	£4.95
80 Col wire printer stand	£6.95
180E Video tapes 3 for	£6.95

ACCESSORIES

Mouse mats (boxed)	£3.49
Mouse brackets	£3.49
4 player cables Amiga/Atari	£3.95
Atari J/S - mouse ext. cable	£3.95
Cleaning kits 3" - 3 1/2" - 5 1/4"	£2.95
Thingi Copy Holders	£4.95
Computer labels per roll of 1000	£9.95
Listing Paper 11x9 1/2 60gsm box of 2000	£15.90

FREE CAR PHONE WITH EVERY ORDER OVER £100.00

Access — Same day despatch — VISA

All prices include VAT and Track Back delivery - for overnight please add £5 per order

* Subject to fitting by Phonetech Communications, Peterborough.

E & OE Prices correct at time of going to press.

0262 679640

F.M. Computer Supplies

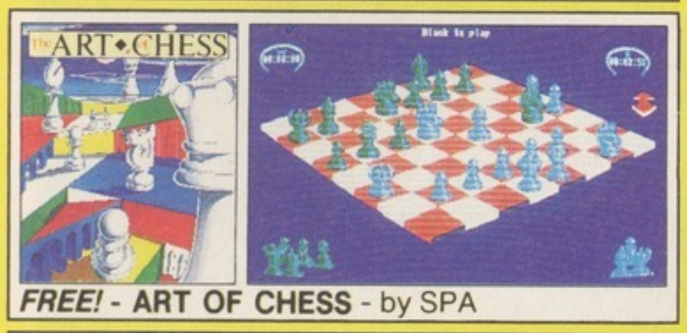
Lancaster House,
Lancaster Road, Carnaby Industrial Estate,
Bridlington, N. Humberside. YO15 3QY.
Fax: 0262 602620

SALE ★ SALE ★ SALE ★ SALE

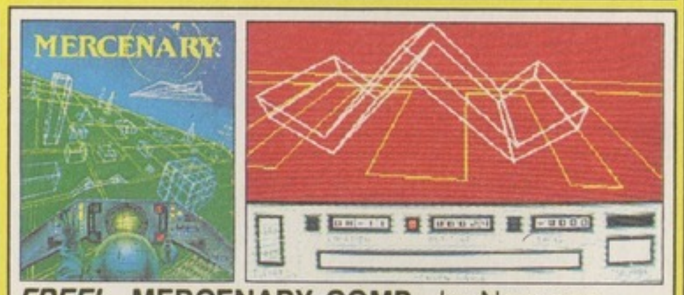
FREE! TENSTAR PACK WORTH OVER £229!

FREE! - AMEGAS - by Players

FREE! - INSANITY FIGHT - by Microdeal



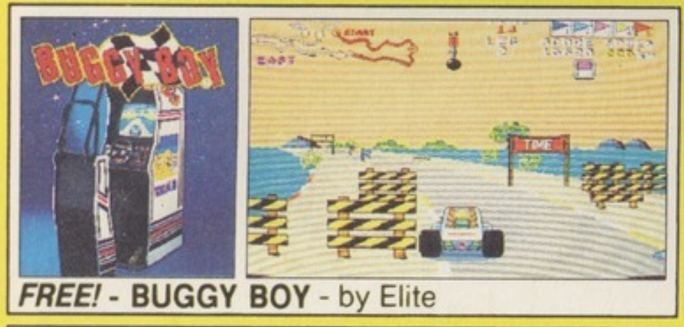
FREE! - ART OF CHESS - by SPA



FREE! - MERCENARY COMP - by Novagen

FREE! - BARBARIAN, ULT WARRIOR - by Palace

FREE! - TERRORPODS - by Psygnosis



FREE! - BUGGY BOY - by Elite

FREE! - THUNDERCATS - by Elite

FREE! - IKARI WARRIORS - by Elite

FREE! - WIZBALL - by Ocean

Commodore AMIGA

£346.95 +VAT = £399

INCLUDES FREE UK DELIVERY

The Amiga 500 is one of a new breed of technologically advanced computers, which are now emerging as the new standard for home computing, based around the new Motorola 68000 chip. The A500 has 512K RAM and a 1Mbyte double sided disk drive built-in. It can be connected directly to a wide range of monitors, or to a domestic TV set through a TV modulator. Designed with the user in mind, the A500 features a user friendly WIMP environment and comes supplied with a free mouse. And, when you buy your Amiga from Silica Shop, the UK's No1 Amiga specialists, you will experience an after sales service that is second to none, including a technical support helpline and free newsletters and price lists. Return the coupon below for our current information pack, which will give details of the Silica service and the very latest Silica Amiga offers. E&OE.

WHY SILICA SHOP?

Before you decide when to buy your new Commodore Amiga computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer as well as expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Amiga related products in the UK, a full time Amiga specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. Here are just some of the things we can offer you:

THE FULL STOCK RANGE: The largest range of Amiga related peripherals, accessories, books and software in the UK.

AFTER SALES SUPPORT: The staff at Silica Shop are dedicated to help you to get the best from your Amiga.

FREE NEWSLETTERS: Mailed direct to your home as soon as we print them, featuring offers and latest releases.

FREE OVERNIGHT DELIVERY: On all hardware orders shipped to Silica Shop customers within the UK mainland.

PRICE MATCH PROMISE: We will normally match our competitors offers on a 'same product same price' basis.

FREE TECHNICAL HELPLINE: Full time team of Amiga technical experts to help you with your technical queries.

But don't just take our word for it. Complete and return the coupon below for our latest Amiga literature and begin to experience the Silica Shop specialist Amiga service.

PHOTON PAINT PACK

A500 Computer	£399.99
TV Modulator	£24.99
Photon Paint	£69.95
TenStar Pack	£229.50
TOTAL RRP:	£724.43
LESS DISCOUNT:	£325.43
PACK PRICE INC VAT:	**£399**

1084S MONITOR PACK

A500 Computer	£399.99
1084S Colour Monitor	£299.99
Photon Paint	£69.95
TenStar Pack	£229.50
TOTAL RRP:	£999.43
LESS DISCOUNT:	£350.43
PACK PRICE INC VAT:	**£649**

FREE FROM SILICA

When you buy the Amiga 500 from Silica Shop, you will not only get a high power, value for money computer, we will also give you some spectacular free gifts. First of all, we are now including a TV modulator with every A500 stand alone keyboard, so you can plug your Amiga straight into your TV at home (the modulator is not included with the A500+A1084S pack as it is not required for use with monitors). Secondly, we have added a free copy of Photon Paint, an advanced graphics package with an RRP of £69.95. Last (and by no means least!), so that you can be up and running straight away, we are giving away the sensational TENSTAR GAMES PACK with every A500 purchased at Silica Shop. This pack features ten top Amiga titles which have a combined RRP of nearly £230! Return the coupon for details.

FREE TENSTAR PACK

When you buy your Amiga 500 from Silica Shop, we want to make sure you get the best deal possible. That is why we are giving away the TENSTAR GAMES PACK worth nearly £230, absolutely FREE with every A500 purchased from us. The TenStar Games Pack includes ten titles for the A500, each individually packaged in its own casing with instructions.

Amegas	£14.95
Art Of Chess	£24.95
Barbarian, Ult Warrior	£19.95
Buggy Boy	£24.95
Ikari Warriors	£24.95
Insanity Fight	£24.95
Mercenary Comp	£19.95
Terrorpods	£24.95
Thundercats	£24.95
Wizball	£24.95
	£229.50

TOTAL RRP: £229.50 INC VAT

DO YOU OWN AN AMIGA?

If you already own an Amiga computer and would like to be registered on our mailing list as an Amiga user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist Amiga service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order) **01-309 1111**
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
OPEN: *MON-SAT 9am - 5.30pm* ***LATE NIGHT:*** *FRIDAY 9am - 7pm*

LONDON **01-580 4000**
52 Tottenham Court Road, London, W1P OBA
OPEN: *MON-SAT 9.30am - 6.00pm* ***LATE NIGHT:*** *NONE*

LONDON **01-629 1234 ext 3914**
Selfridges (1st floor), Oxford Street, London, W1A 1AB
OPEN: *MON-SAT 9am - 6.00pm* ***LATE NIGHT:*** *THURSDAY 9am - 8pm*

To: Silica Shop Ltd, Dept NCE 0390 1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX

PLEASE SEND ME FREE LITERATURE ON THE AMIGA

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

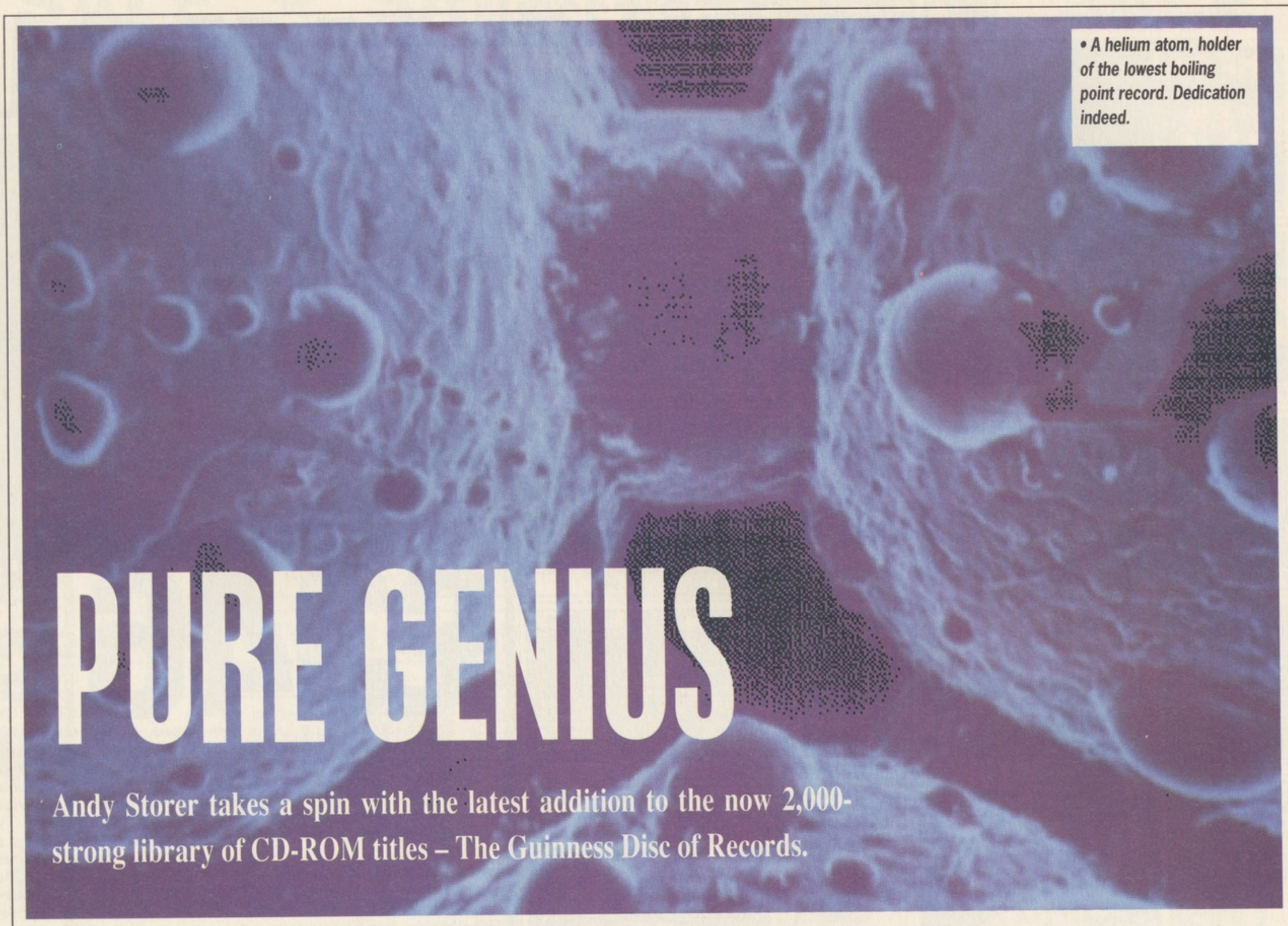
Address: .....

.....

.....

..... Postcode: ..... Dept NCE 0390

Do you already own a computer
If so, which one do you own? .....



• A helium atom, holder of the lowest boiling point record. Dedication indeed.

PURE GENIUS

Andy Storer takes a spin with the latest addition to the now 2,000-strong library of CD-ROM titles – The Guinness Disc of Records.

You might be forgiven for wondering why *Express* is covering the *Guinness Disc of Records*, as it needs a Macintosh with a minimum of 1Mb of RAM and requires a CD-ROM drive. The answer is simple. This CD-ROM is a good indication of the kind of material we will see becoming available for PC, Amiga and Archimedes owners in the next year or so.

Able to hold 4,000 colour images or the equivalent of 1,500 floppy disks of data, the potential for reference sources is enormous. For instance, *Computer Library* is a single disc containing the full text of eight computer magazines over a 13-month period offering 43,000 articles with a seek time of less than 10 seconds. Were the magazines stacked on your shelves they would stretch for 63 feet! But other applications will be forthcoming too – massive games are only one of the areas which are coming to fruition now.

EXPANDING

With CD-ROM units available for as little as £350, and the catalogue of titles rapidly expanding, it's a only a matter of time before mixed media offerings become affordable. *The Guinness Disc* retails at £60 – a pittance when one considers the byte-per-pound value. For all in all there are over 120Mb of text, colour photographs, animation, music and sound effects on the five-inch disc. What's more there's a super-fast text search routine which allows you to access any subject in seconds.

Some two years in development, the disc is a faithful translation of the 6,000,000-selling book and is organised around three main subject headings – Natural, Physical and Sporting. Navigation through the vast data structure is via a *Hypercard* front-end which allows you to click on icons representing various search and retrieval criteria. *Hypercard* is ideal for this kind of application since it's able to treat data of any form – text, animations, colour images – uniformly, and the simple click-and-play interface is ideal for the computer novice.

INNOVATIVE

The Guinness Disc is innovative as a CD-ROM because it represents the material it contains as an interactive encyclopaedia. The book format is followed pretty closely with each main category having a contents page which can merely be clicked on to advance to subsequent levels. Each contents card has an index icon that gives you the option of browsing through the pre-written indexes of What, Where and Who before clicking on a topic to find all the references to your particular choice. Likewise you can hit an icon to search for any particular word or subject across the whole of the disc.

Taking the book analogy further there's even an icon which takes you to a random position in the data as if you had just opened the real book for a lazy browse. This feature has also been extended to incorporate a random slide show of the pictures present on the disk. When you see a picture that interests you all you have to do is click on it and you are taken to the Record associated with it.

The Record screens themselves are largely composed of scrollable text windows with the occasional animation, or photograph requiring an overlaid screen. CD-quality stereo sound accompanies most animations and some of the records relating to music and speech. Excerpts from Holst, Handel, Shostakovich and Stravinsky sit side by side with the sounds of cicadas, sonic booms and world's fastest backwards talker. Altogether there are 20 minutes of animation representing 4Mb of data, running via *Macromind Director*, and over 300 colour pictures taking up over 60Mb of the disc. ■

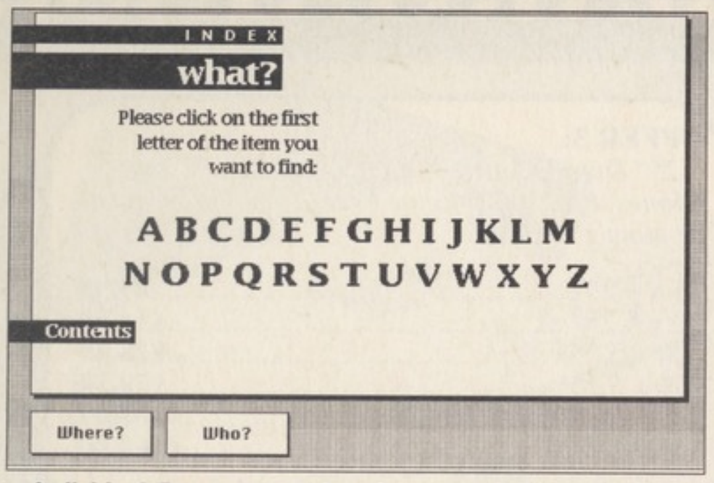
PAGE COUNT

***The Guinness Disc* comprises 120Mb of data representing 1,357 files. Of this 72Mb are taken up by colour slides and 9Mb consisting of animations and tables. The Records data itself is held in one file which is some 19Mb in size!**

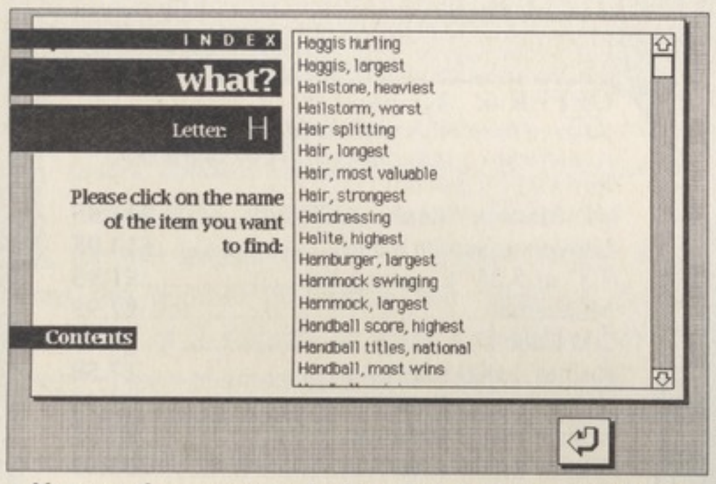
ANYONE FOR A GUINNESS?

Although there are as yet no plans to release the *Disc* for other machines, you can expect to see it appearing on the PC next as there's already a large installed user base. It would also make sense for its distributor, Mirrorsoft, to look at the educational markets centred on the Nimbus and Archimedes machines as these both have CD-ROM drives. Whether this title will make it to the Amiga CD is open to question.

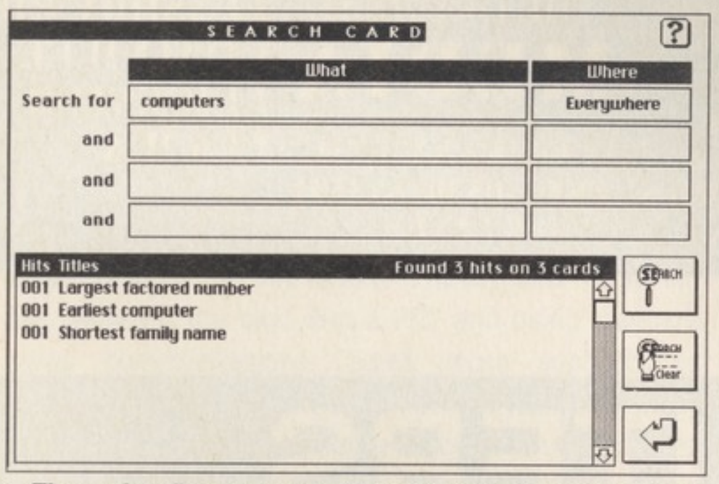
However, the Amiga is beginning to become well-supported in the States as a multimedia machine, indeed it's a catch phrase Commodore is touting as befitting the new Amiga A3000, so smart money would be on its arriving in the next year or so. After all, if the book version sold 60 million copies and all the data has been compiled for the CD version, it would seem there's money to be made.



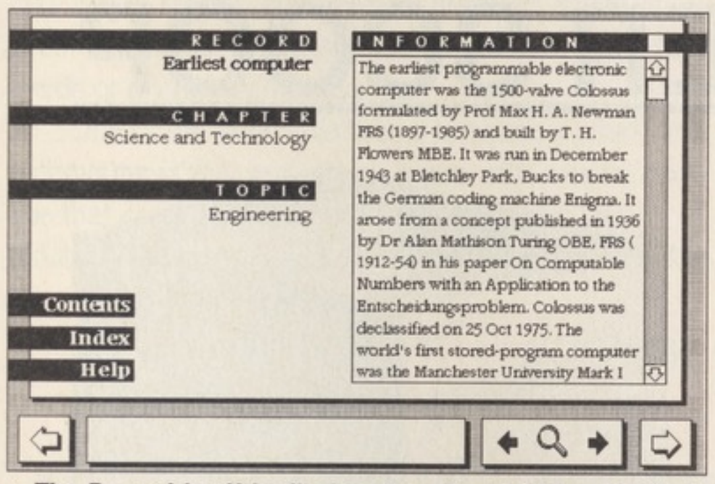
• *Individual Records can be chosen alphabetically, after first having selected the category from What, Where and Who. Then the initial letter is picked.*



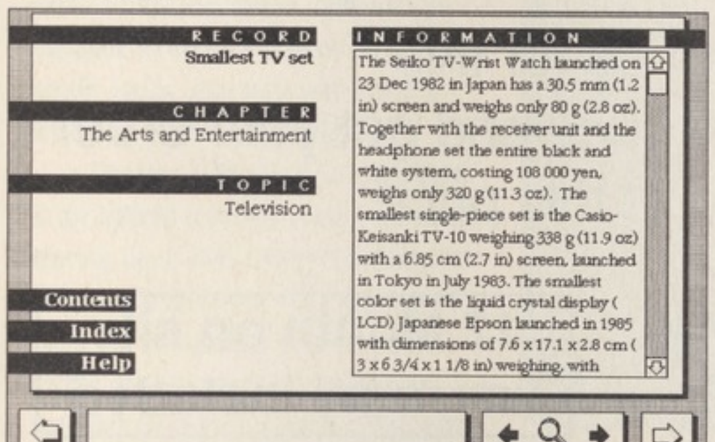
• *You are then presented with a list of all the topis beginning with that letter. As you can see, the list is comprehensive enough.*



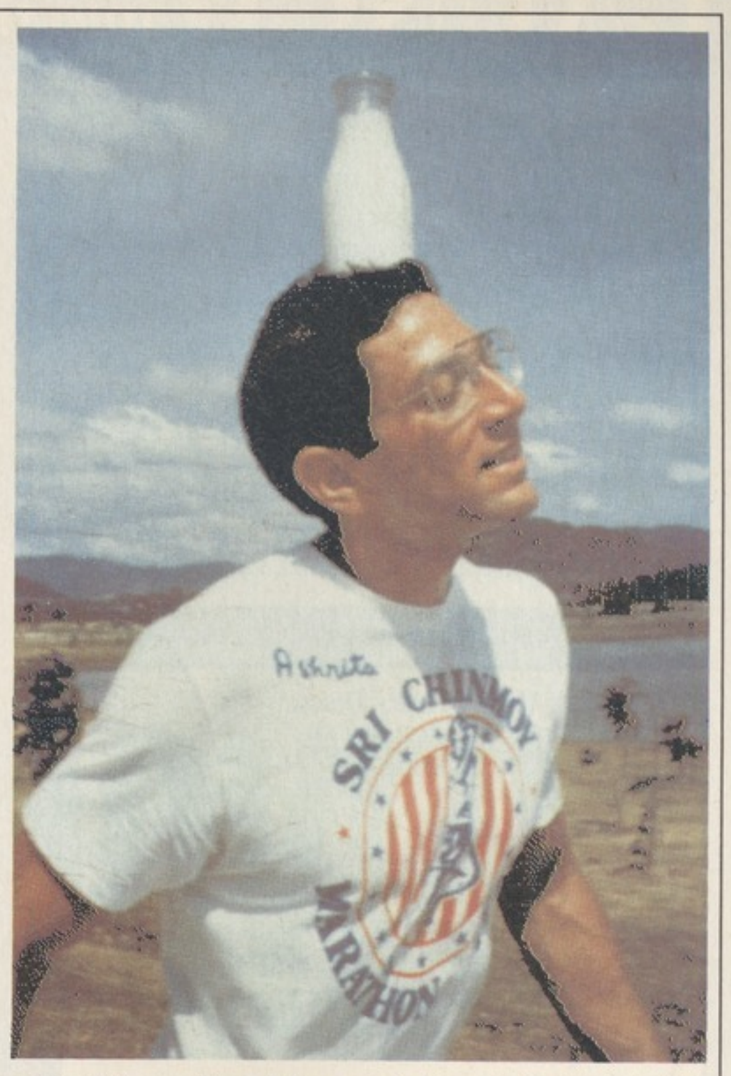
• *The entire disc can be searched for any keyword, which will find a reference buried deep in the text of a Record. The found records can then be flicked through.*



• *The Record itself is displayed on the right-hand half of the screen. The scroll bar by the side lets you read the rest of the text.*



• *The large arrows take you forwards and backwards through the Records. Clicking on the magnifying glass lets you do a keyword search of the record, and find other references in other files. The rest of the bottom line is used for icons indicating the presence of accompanying pictures, music or animations.*



• **The Guinness Disc of Records** *is liberally illustrated with excellent digitised colour photographs and animated presentations.*

From a Record screen – such as that for the longest distance walked with a milk bottle on your head (left) – you can call up the corresponding picture (above). A slideshow lets you browse throgh the pictures, like this aerial shot (above left) and the planet from space (below).

LAUNCH into the nineties, a new decade of BARGAINS!!

ALL PRICES INCLUDE V.A.T.

OFFER 1:

Double Sided 31/2" Discs, Individually Wrapped, 880k 135 tpi, ideal for Amiga, ST, etc.,Blue, Pin No., made in Japan, 100% Error Free, 2 for 1 Warranty or money back.

10 x 3.5"	**£4.90**
25 x 3.5"	**£11.95**
50 x 3.5"	**£23.50**
100 x .3.5"	**£45.95**
250 x 3.5"	**£109.95**
500 x 3.5"	**£209.95**
1,000 x 3.5"	**£395.00**

OFFER 2:

Genuine "Sony' 3.5" Discs Double Sided, made in Japan, sold in Sony outers, probably the best disk in the World!

10 x 3.5"	**£5.90**
25 x 3.5"	**£14.35**
50 x 3.5"	**£27.59**
100 x 3.5"	**£53.95**
250 x 3.5"	**£133.95**
500 x 3.5"	**£256.95**
1,000 x 3.5"	**£483.50**

3 1/2" DISKS FROM 39 1/2P

OFFER 3:

5.25" Double Sided 48/96 tpi for IBM PC and Clones, Etc, 100% Error Free, 2 for 1 warranty or money back.

25 x 5.25"	**£7.95**
50 x 5.25"	**£14.95**
100 x 5.25"	**£28.40**
250 x 5.25"	**£70.50**
500 x 5.25"	**£135.00**
1,000 x 5.25"	**£260.00**

Complete with Labels, envelopes & w.p.'s

OFFER 4: High Density Discs.

when only the Very Best will do.

5.25" HD 1.6mb for IBM, AT, Etc.		*3.5" D/SHD 2mb, made in Japan, HD in corner of Disc.*	
10 x 5.25" HD	**£6.95**	10 x 3.5" HD	**£13.90**
25 x 5.25" HD	**£16.25**	25 x 3.5" HD	**£33.50**
50 x 5.25" HD	**£31.95**	50 x 3.5" HD	**£65.00**
100 x 5.25" HD	**£59.95**	100 x 3.5" HD	**£121.95**
250 x 5.25" HD	**£144.95**	250 x 3.5" HD	**£292.50**

Including Labels, Envelopes & w.p.'s
100% Error Free. 2 for 1 Warranty

OFFER 5: 'Keep your data safe'

Top Quality Anti Static Lockable Disc Boxes, complete with 2 keys, Small or Large Capacity, ideal for Home or Office use!

3.5" x 40 Capacity	**£3.95**
3.5" x 80 Capacity	**£4.95**
3.5" x 100 Capacity	**£5.95**
5.25" x 70 Capacity	**£3.95**
5.25" x 100 Capacity	**£4.95**

OFFER 6: Accessories;

Sourced from the world's leading manufacturers, Quality and Price Guaranteed. Buy with Confidence

14" Monitor Stand	**£14.95**
Universal Screen Filter	**£14.95**
3.5" or 5.25" Cleaning Kit	**£1.95**
Mousemat	**£2.95**
200 Labels	**£2.99**
Roll of 1,000 Labels	**£7.50**
PC or Amiga Cable	**£5.95**
Mouse House/Bracket	**£2.95**
Printer Stand with Tray	**£13.99**
Printer Stand	**£11.95**

Four Good reasons for choosing Original Media as your Supplier,

1 No Minimum Order.
2 Access and Visa accepted
3 Next Day Delivery (If order placed before 12.00 a.m.)
4 Free Helpful Advice

Access VISA

Post add £2.95 per order. Next Day Courier £7.95

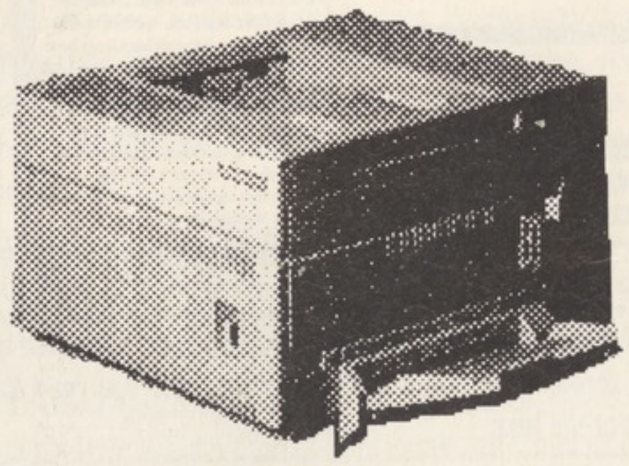
CORPORATE, EDUCATION & TRADE ENQUIRIES WELCOME.

THE ORIGINAL **MEDIA** COMPANY LTD.
TEL: (0530) 813591 (8 LINES)

14 ASHBY RD
COALVILLE
LEICESTER
LE6 2LA

UK HOME COMPUTERS

CITIZEN LASER PRINTER SCOOP



Don't miss this superb once-only offer. The fabulous Citizen Overture 110+ Laser Printer. Look at these features:- 10 pages per minute, Epson fx-85, IBM Proprinter, & Diablo Compatible. 300X300 dots per inch, 512k on-board memory, Dual interface, i.e. Centronics & RS232, Output in either landscape or portrait, face-up or face-down,approx. size 19" X 17" X 12.5". The average selling price for this printer is currently around £1000.00p plus VAT. Look at our price and get your order in now to avoid being disappointed. Stocks are very limited at this price.

OUR PRICE £699.95p

Plus VAT & Carriage TOTAL £820.00p

12 Month on site warranty included

Access VISA

VISA/ACCESS orders welcome. Prices subject to change without notice. All transactions are subject to our standard conditions of sale, available upon request. Personal callers welcome by appointment.

UK HOME COMPUTERS
82 Churchward Ave. Swindon, Wilts SN2 1NH (0793) 695034.

• In smart cards the processor and accompanying units are contained in the small metallic square.

SMART MOVES

This year will see the number of smart cards in daily use in Europe tip the 20 million mark. By 1995 this figure will more than treble. Andy Storer finds out why...

Industry sources estimate there are 250 million plastic cards in circulation in the UK, representing transactions amounting to over £3.5 billion – by far the largest market in Europe, nearly three times the number in France and Germany. So it's something of a surprise to learn that Britain has the lowest uptake of smart card technology in Europe.

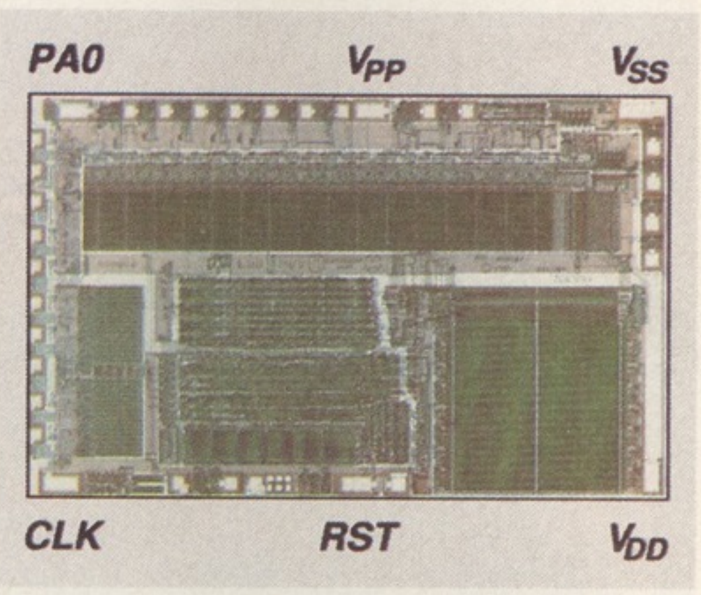
A true smart card is a durable credit-card sized slice of plastic containing an embedded 8-bit microcontroller comprising of a central processing unit and some RAM, ROM and EPROM storage. Whereas your everyday banker's card only holds 1K of data on a magnetic stripe, many smarts can now hold up to 128K, with memory protected by either physical fuses or logical safeguards in the form of dedicated bits. In addition, some feature miniature keyboards, LCDs and a battery.

Communication is largely through 16 or more edge contacts that interface to a smart card reader sitting between the card and a PC, and using standard serial communications. Some more sophisticated smarts, just coming on the market, use radio frequency or inductive surfaces to transmit and receive data. The storage media, in either EPROM or EEPROM form, is structured in files allocated, retrieved and protected by the on-board operating system contained in ROM. By and large, smarts are used in areas of sensitive or secure data, so protection is afforded by either passwords or cryptographic keys.

One of the main differences between a smart and a computer is that its CPU is unique, with a serial number that can be personalised for a specific person or function. So, although a name can be printed on the card, or a picture or signature added or even digitised, security remains assured through the encoding.

With developments like Canon's re-writeable optical card holding up to 4Mb, it seems clear that, as we enter the Nineties, the dream of credit-card sized data storage will become a reality. In the meantime though, it is the security benefits offered by smart cards that are attracting most corporate interest.

Although the notion of an 'intelligent card' may be something of a misnomer, the range and type of data that can be stored leaves the smart card as a technology that is only just beginning to take off. Residents in Milton Keynes already use smarts as charge cards for transport and leisure facilities, while in Jersey their use goes beyond this to include medical records and a host of different retail outlets. It's not too difficult to envisage non-contact smarts being used in some future electronic tagging scheme similar to the recently scrapped venture to monitor football supporters.



• The processor at the heart of a smart card – Motorola's MC6805 chip.

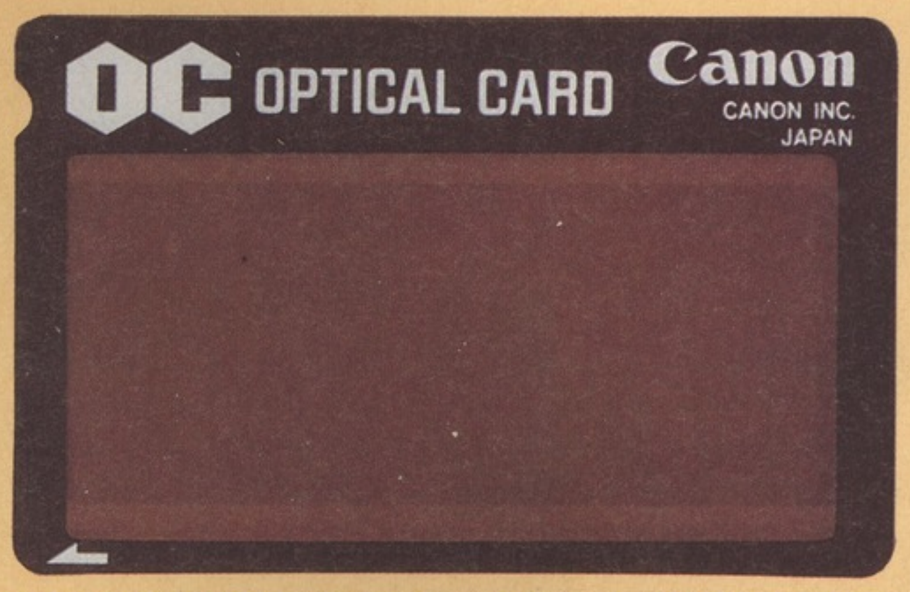
In that instance, it was the time taken to process data, rather than the perceived need to process it, that led to its demise. With radio-wave readers, the technology would enable such legislation to proceed. ■

SUPER SMARTS

Austrian manufacturer ELIS has a smart that can be read and written to at a distance while in motion using radio communications. As it can be supplied in various shapes including credit cards, dog tags and buttons it's being pitched at ID cards.

Drexler Technology's LaserCard is an optical memory card capable of storing up to 4Mb of data suitable for write-once and read-only applications. It's completely non-erasable, highly durable and has the built-in facilities to store digital photographs, signatures, voice and finger prints and even X-ray pictures! Data is stored and read by laser and data can be output to video printers.

More exciting for the future of mass storage is Canon's new optical card system which includes a £900 reader/writer that can access 2Mb laser cards costing only £2.40 each. Although it won't be available until next year you can get further details on 01-773 3173.

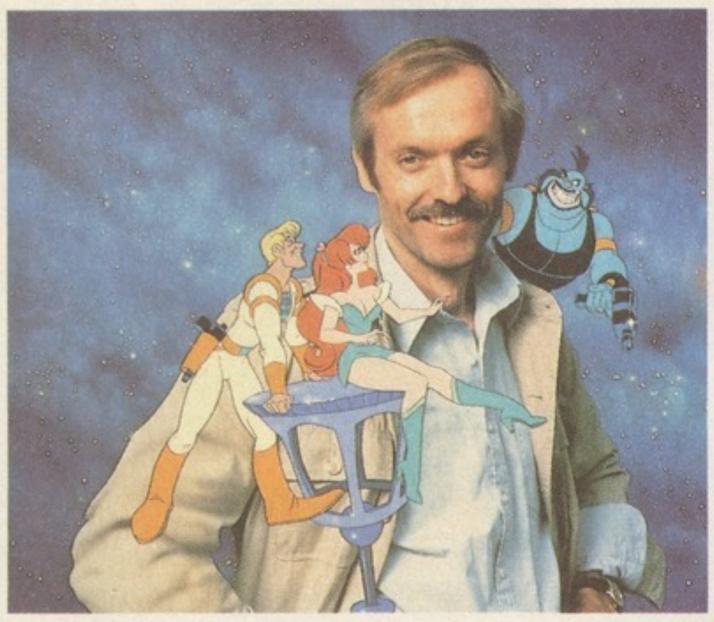


• Canon's optical card system uses cards which store 2Mb of data and cost only £2.40.

SMART USES

How convenient it would be to use just one card instead of several for all your everyday uses – withdrawing cash, making phone calls, paying for goods. That's the prevailing philosophy of smart card manufacturers. How inconvenient to lose just that single card though! In the meantime, these are the areas currently getting smart :

- **Health care and social security**
- **High-security access**
- **Optical filing**
- **Electronic funds transfer**
- **Automatic fare collection**
- **Shop floor control systems**
- **Portable personal databases**



• *Don Bluth with just a few of his creations.*

DIGITAL DISNEY

With Dragon's Lair and Space Ace, Don Bluth can arguably claim to have delivered a new dimension in home computer entertainment. Andy Storer casts a critical eye over the future of 16-bit computerised cartoon action...

Remember *Dragon's Lair*? An arcade extravaganza running off laser that ate money like there was no tomorrow? Well, tomorrow's already here in the form of its sequel, *Space Ace*. But now Don Bluth's game is now due out on the ST after a recent debut on the Amiga, and while its gameplay may leave a lot to be desired, there's no doubt its graphics and sound push the 16-bit beauties to new horizons.

These two games, and to a lesser extent *Who Framed Roger Rabbit?*, point the way to a possible future for 16-bit entertainment. With more gameplay, could we see the emergence of a cartoon industry centred around the micro? It's not too difficult to imagine – the only countervailing factor is the lack of cheap mass storage devices. Because high-quality graphics take up acres of disk space the genre is limited. It's hardly surprising gameplay is downgraded when full interactivity would require dozens of disks. But with the emerging technology of CD-I – witness Titus's release of its *Titan* CD-I game announced in *Express* 68 – the storage capacities will be available. With the likes of Pixar, and Industrial Light and Magic expressing interest we could see simultaneous cinema/computer releases.

BLUTH'S PAST

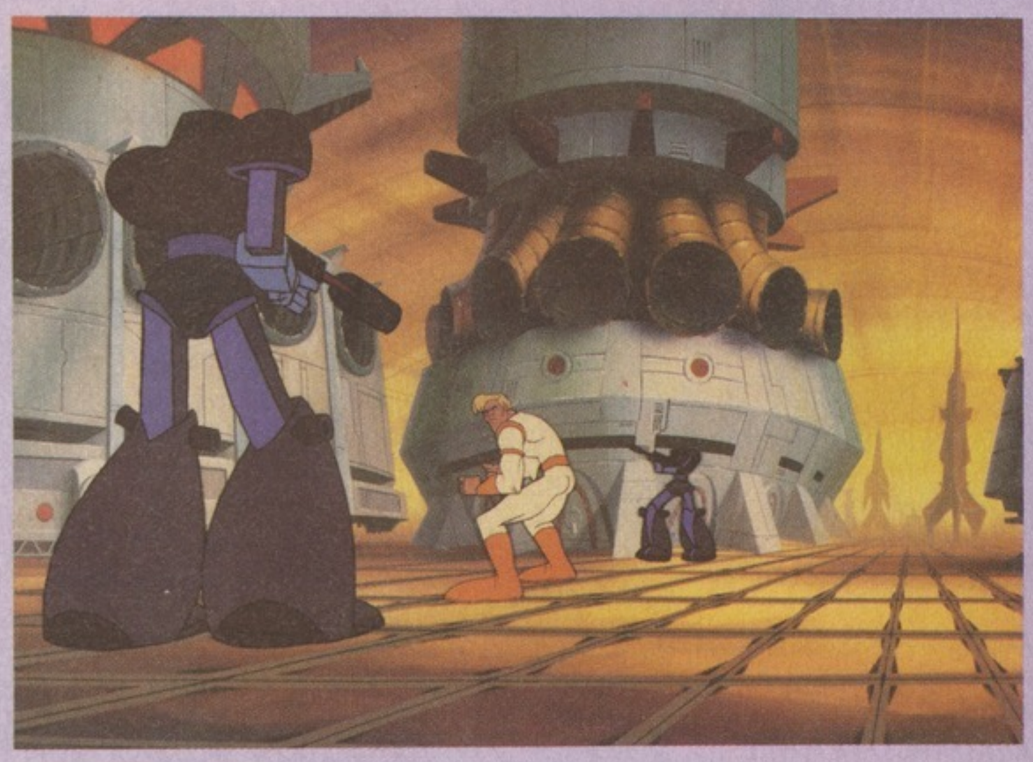
Disney-buff Bluth was lucky enough to take an apprentice job working on the master's *Sleeping Beauty*. As assistant animator, he was responsible for 'tweening' – the process of drawing all the in-between frames for the key characters' actions. By 1978 he'd worked on *Robin Hood* and *Winnie the Pooh* and directed *The Rescuers, Pete's Dragon* and *The Fox and the Hounds*. However, artistic arguments with the Disney organisation, principally over what Bluth believed to be the company's diminishing creative standards, led to him quitting to form his own company.

Five years of experimentation followed, in which time he looked at ways of combining computer technology with traditional cartoon animation. And then in 1983 he teamed up with Magicom to produce the first interactive cartoon – *Dragon's Lair*.

A LOOK AROUND THE GAME

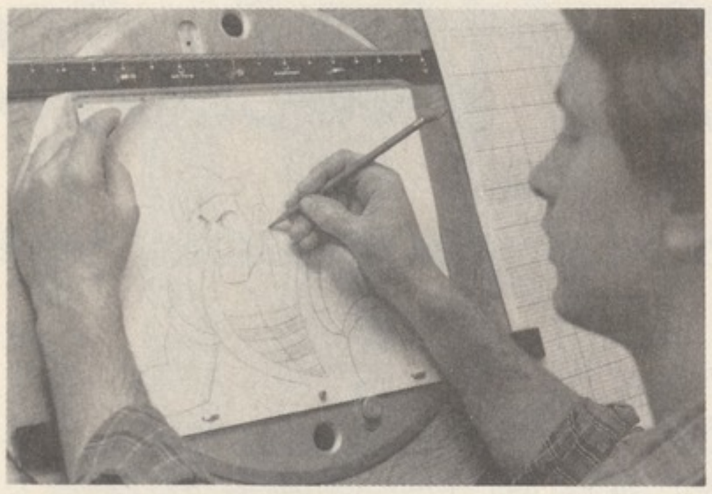
• *The alien Borf greets you on the opening title screen.*

• *One false move and you're so much dead meat for the Cavern monsters.*



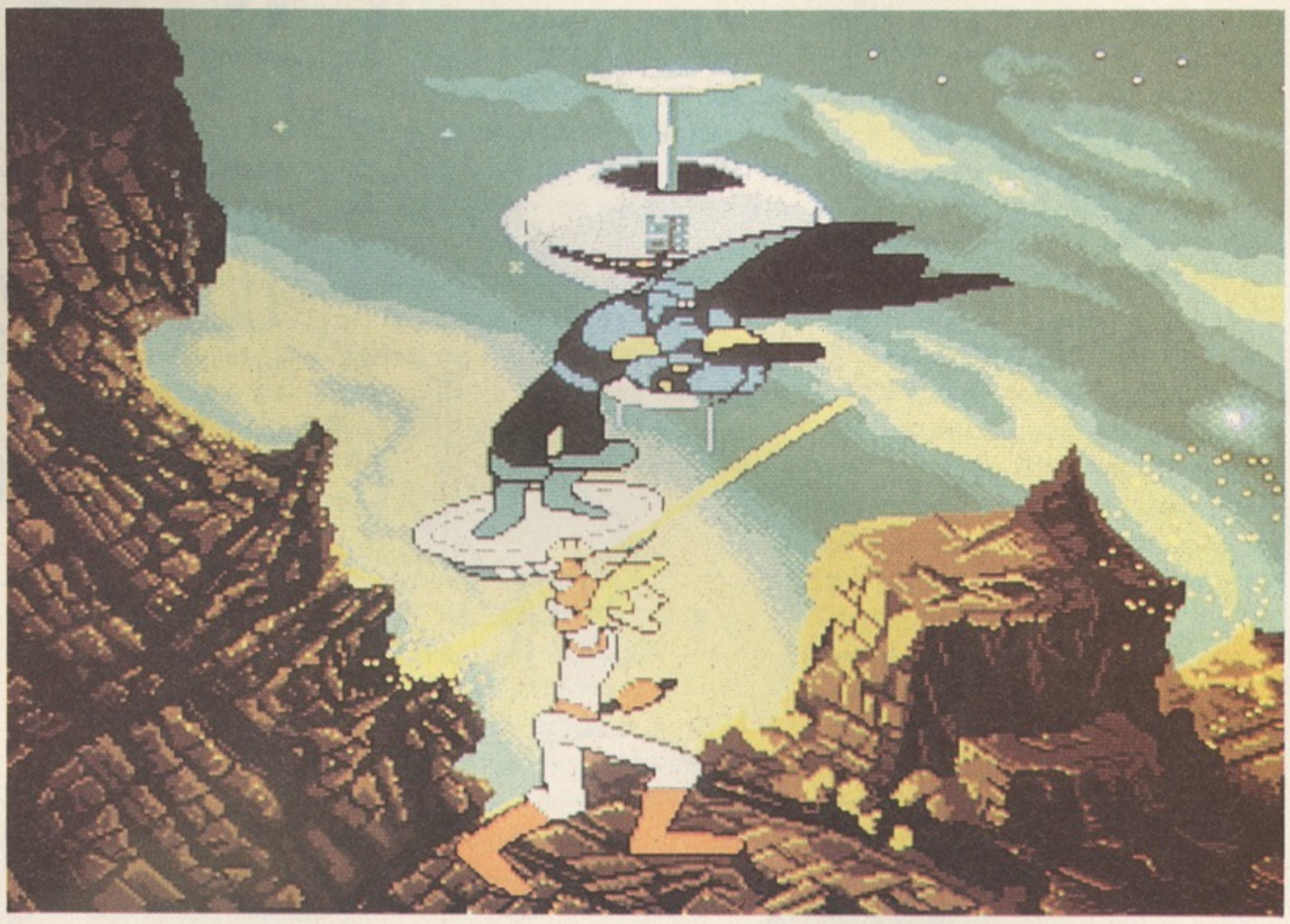
• *You can leap out of the way in time for these two guard robots to shoot each other.*

• *When you first get to Borf's ship you have to take on these two guard dogs.*



• The original artwork for Space Ace was hand-drawn and then cel painted before being filmed. The resulting animation was then digitised onto an Amiga using Digi-View and ported over to the other machines from there. In the process the 16 million colours of the original Laserdisc are reduced to 16.

• The very first action sequence – above the arcade version, and below on the Amiga.



CRITICISED

Although criticised for the implementation – the gameplay relied on lightning-fast responses – the Laserdisc arcade version became well-known enough to become a classic. A classic for all the wrong reasons though. The memory is more likely to revolve around who put the most 50ps in the slot trying to complete even the first screen, than what a lasting audio-visual experience it was. Nevertheless, 25 minutes of animation, filmed, videotaped and etched into the pits of a Laserdisc, became a game played in 25,000 arcades worldwide.

Dragon's Lair found its way to the Amiga over here last year in the form of six disks. And impressive stuff it was too, except for the fact that it was more or less unplayable. It seemed to be consigned to the demo shelves – to be only taken out to impress one's friends with the tremendous power of the Amiga. Some six months later it appeared on the ST and Magicom had proved you didn't necessarily need state of the art custom graphics chips to deliver leading-edge visuals. The argument remained though – was this a game to merely view or were you expected to gain from a gameplay experience? The truth is somewhere between the two – it remains the ultimate demo and, cas a consequence, by far the most sought-after pirated game.

UNRELENTING

Space Ace could have been different, but it remains the same. Only this time the action is half as fast again and unrelenting. What gameplay there is is smoother, but the degree of interaction between the player and cartoon character is, again, minimal. So what's Don Bluth playing at, bringing out games at £45 a throw that he himself admits a nimble player can complete in eight minutes?

For starters, he would argue that in interactive cartoons he's found the first new application for animation since 1949 saw the birth of Crusader Rabbit, the first character designed and animated specifically for television. Secondly, he's talking 'Total Resolution Graphics'. Canadian coder Readysoft has the contract to transfer all Bluth's work to personal computers. The full-screen animation and sound of the original laser show has been squeezed into 40 fast-action scenes using advanced compression techniques after being digitised onto the Amiga using Digi-View. Then all backgrounds and foregrounds are touched up by a team of a dozen artists. PC and ST versions are then ported over. In the process the 16.7 million colours of the Laserdisc become 16 colours on the 16-bits, but the results remain impressive.

Next on the cards for Readysoft is *Dragon's Lair II* for all 16-bit machines. Whether this will make it to the arcades remains to be seen – Nintendo has the rights to the game. ■

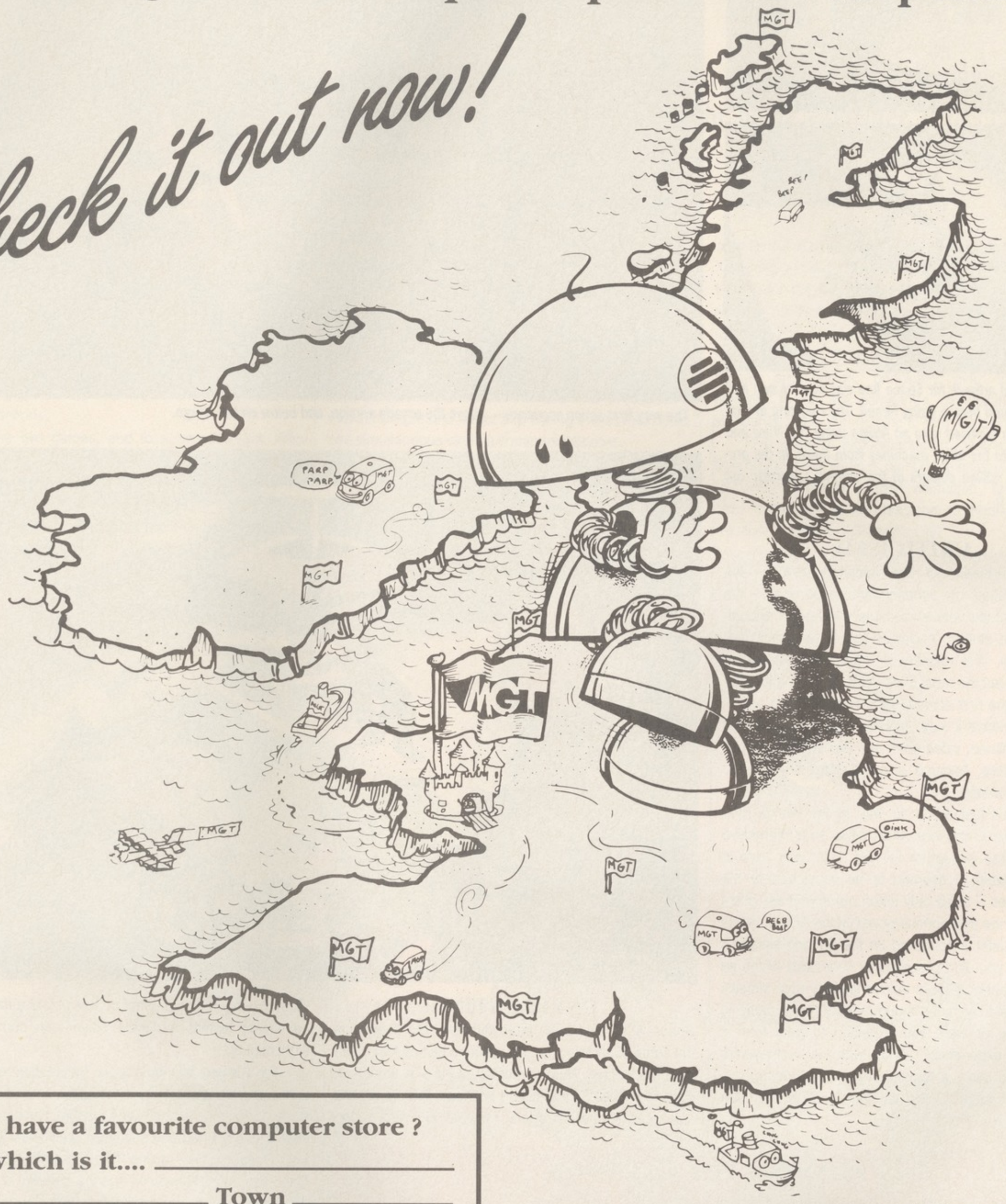
PLAYING THE CARTOON

Now that lots of coins have been replaced by lots of notes, what does *Space Ace* offer for the gamester? Well, you take control of Space Ace himself in a battle against Borf, an alien tyrant who's decided to take over the Earth by turning adults into children. Only thing is, *Space Ace* is now child himself called Dexter, and he also has to rescue his sidekick, Kimberley. The action begins on a clifftop overlooking Borf's ship, where you must dodge laser blasts and continues in a similar vein past rocky canyons and stomping robots to Borf's ship itself. Here you're up against guard robots, guard dogs and auto-defence systems. Finally you have to take on Borf in hand-to-hand combat with laser staffs and rescue Kimberley. It's all extremely fast action stuff but unfortunately all your input in the proceedings consists of is moving your joystick at the appropriate time. Which means incessantly. After a while, as with all shoot-'em-ups irrespective of their quality, you know all the timings and it's plain sailing. With *Space Ace* there are probably a couple of manouvres per level to keep you on their toes, and the inclusion of a Save Game feature means that it's made even easier to complete. But in the meantime, just check out those graphics...

SAM Across the Nation

The exciting new SAM Coupé computer is at a shop near you.

Check it out now!



Do you have a favourite computer store ?

- If so which is it.... _____

Name _____ Town _____

Please send me details of my local SAM Coupé stockists:

Name :- _____

Address :- _____

_____

MILES GORDON TECHNOLOGY Plc
Lakeside
Phoenix Way,
Swansea SA7 9EH

N.C.E.

MILES GORDON TECHNOLOGY Pl

Lakeside, Phoenix Way
Swansea SA7 9EH
Tel: 0792 791100
Fax: 0792 791175
Telex: 48297 JOYTEL G

TECH TIPS

Does your PC keep packing up? Is your Amiga less than friendly? Would your ST try the patience of a saint? Write to Uncle Tech Tip, he'll see you right. Send your sorry stories to Uncle TT, 30 Monmouth Street, Bath BA1 2AP. There's a prize for the most pitiful tale

TIP Feeding time

The problems discussed recently in Tech Tips about Spectrums and their random insertion of line feeds when printing documents can be cured by me.

The problem lies with the Spectrum's interrupts which occur every 20ms and insert intermittent random line feeds and occasional double characters. I have written a routine to combat this and can now supply it to other sufferers on 3-inch disk for the princely sum of £5.

Neil Morgan, 85 Crescent Road, Bolton, Lancashire.

HELP! Cyber man

I intend to use the *Cyber 3D* animation series and I require a two-megabyte Atari ST to run it.

One of the advertisers in *Express* is offering this at £450, which is just superb! Is this price so low because the STE is so easily upgraded and the memory chips are cheap, or are there inferior memory upgrades for the STE which should be avoided?

B. Abraham, West Jesmond, Newcastle upon Tyne.

Don't worry about inferior upgrades and the like! Large memory STEs are priced thus because they're easy to upgrade using cheap and widely available SIMMs (Single In-line Memory Modules). Rush out and buy the STE at £450 – you won't be disappointed!

TIP Kit capers

Some time ago I was fitting a second drive to my Amstrad PC1512 and decided to fit the Citizen 525MFR kit. The instructions supplied with the kit were a little cryptic but by means of trial and error I discovered the correct procedure for fitting the drive which might be of help to other readers.

First, the original drive has to configured to enable it to operate correctly in a two drive environment. This is done by removing it from the casing and shielding, looking at the rear of the drive where there will be a row of points marked from DS1 to 4. Behind these there is another set of points marked VA and DA. Remove the jumper from the VA terminals and place it on the DA terminals, reassemble the drive and place it back it in the case.

Next, set the drive selection switch on the Citizen drive one notch back (towards the front of the drive) install it into the casing, connect to the existing interfaces and bingo!

Either drive can be configured to be drive A by a reversal of the above dip switch settings. It only remains to go into the `CONfiG.SYS` via the *Edlin* editor under MS-DOS and add the line `DRIVPARM=/D:N` where N is the device number (1, 2 or 3). Hope this helps some poor reader.

T A O'Connor, Port Glasgow, Inverclyde.

HELP! Deep blue C

I have just got hold of Sozobon C, but I am experiencing problems working out how to use it. What would greatly be appreciated would be a step-by-step guide to how to compile, assemble and link a C source program, preferably with an example of a GEM program.

Ian Ferguson, Carlisle, Cumbria.

The problem with using public domain programs, alas! Worry not however, as *Express*' sister magazine *ST Format* is currently producing exactly what you require – a complete guide to programming using the C language with examples based upon Sozobon C and GEM. *ST Format* costs £2.95 with a disk and is available from good newsagents everywhere.

HELP! Multi-lingual Amiga

Here are a few points regarding Chris Winnera's letter in *Express* 63 *(He wondered whether buying an Amiga in Germany was a good idea – Uncle TT).*

Any software bought in Germany is likely to have its instructions in German and may well not be covered by a guarantee back here in the UK. There are however, quite a number of software titles that have multi-lingual instructions, it's just a case of shopping around. As for buying an Amiga out there, work out the exchange rates and if it's a bargain then go for it. The machine will not talk to you in German except when you insert the Workbench, Extras or The Very First disk. Fortunately, all of these are available here in the UK with manuals in English from various sources (for example from Wizard Software). Also you must configure the keyboard to GB so that it understands English.

You must be aware, however, that a German keyboard has its Y and Z changed about. Bear in mind that it will cost an extra £20 to convert to an English language system, but if the offer is cheaper then it could be worth it. Sorry I rambled on a bit, but it might be useful to anyone considering this method of obtaining a cheap Amiga.

And now to some questions. Is there any way I can find out about modems and bulletin boards before I part with my money? What can I read? My son has a Commodore 64. Can one modem be used both for this and my Amiga? Where can I find out about the Amiga in amateur radio? Is there any way I can use the Commodore 64 as a printer buffer so that I can get on with other things while my MPS1230 is squeaking away?

Andy Beveridge, Fleet, Hants.

For the German Amiga tips – well done! There is a very simple way to find out all about modems, bulletin boards, general ham radio principles and all manner of other communications subjects, buy a copy of the *Hacker's Handbook* by Hugo Cornwall. Originally published in 1983, the book caused a storm of protest from the powers-that-be for its frank narrative detailing hacking methods. After various bits of litigation, the book was revised and is currently in its fourth impression. Now without many of the phone-phreaking and hacking snippets, but still bulging with juicy sections detailing all aspects of comms, the *Hacker's Handbook* is the best read around for anyone about to embark on a serious of nights before a glowing computer screen and trilling modem. The *Hacker's Handbook* (ISBN 0 7126 9711 X) by Hugo Cornwall is published by Century Hutchinson and is priced ata reasonable £6.95.

You can use the same modem with the Amiga and the C64 as long as you have an RS232 interface for the C64. The C64's hybrid serial ports don't allow the connection of third-party peripherals, so you must attach an interface. One of the better suppliers of all things C64ish is Meadmore LTD. Commodore 64 owners everywhere sing the company's praises as it supplies a wide range of electronic bits and pieces for the C64. Contact Meadmore on 051 521 2202.

The C64 as a printer buffer? Not without serious programming. The task would require a patch to intercept data being ported over from the Amiga, store it in RAM and write it out to the printer port – not an easy task! However, the Techtippers are an inventive lot and someone, somewhere may have already solved this particular little printing problem. If you are that Techtipping programming genius then call me. Fame and fortune awaits...

HELP! PD quick!

I have been building up a nice little collection of public domain disks from the covers of the monthlies ready for when I buy an ST. However, what can I do now? I am doubtful whether these disks will work on the STE. But if I do get the STE, will the monthlies soon be publishing disks that won't work on a good old plain ST?

By all accounts the STE is just a big spanner in the works, and while no-one can predict the outcome, I wonder whether it might be good idea to put off the purchase until the matter has been resolved. I have in mind using my STFM1040 for music sequencing software. Earlier I was keen to go for an ➤

2ND ALL FORMATS COMPUTER FAIR

The show for the computer enthusiast and hobbyist.
Thousands of bargains for all types of computers.

SAT, APRIL 28th – 10 am-5 pm
SUN, APRIL 29th – 10 am-4 pm

2nd All Formats COMPUTER FAIR

VENUE:
The New Hall of the Royal Horticultural Society, Greycoat and Elverton Streets, Westminster, London.

NEAREST TUBES:
Victoria, Pimlico, St James's Pk.

STAND SALES & ADVANCE TICKETS:
JOHN RIDING: 0225 · 447453
MIKE HAYES: 0457 · 875229

STANDS ONLY £120.00
Admittance £3.00

RAMSOFT
AMIGA & ST SPECIALISTS

UNIT 1 DRAKE HOUSE
160 DRAKE STREET
ROCHDALE, LANCS
OL16 1PX
TEL: 0706 43519

*** A500 BAT PACK ***
A500, TV Modulator, Deluxe Paint II. Interceptor.
New Zealand Story, & Batman - The Movie
***** £359.00 *****

A500 BAT PACK +
This Pack as above Plus
Ten Star Pack.
1: Amegas, 2: Art of Chess, 3: Barbarian, 4: Buggy Boy,
5: Ikari Warriors 6: Insanity Flight, 7: Mercenary Comp,
8: Terrorpods, 9: Thundercats, 10: Wizball.
R.S. PRICE ! £379.00

Class of 90's
Now in Stock
Only £525.00

MONITOR PACK.
Buy any pack & we will offer a Philips CM8833 FOR ONLY £239 inc lead

COMMODORE 1084 £229.00
PHILIPS CM 8833 ! £249.00
All Monitors Include Leads!

Universal Monitor Stands
Only £16.50

PRINTERS

STAR LC 10 MONO **£159.00**
STAR LC 10 COL. **£199.00**

PRINTER RIBBONS
ALL MAKES AVAILABLE, LOW PRICE
EG: STAR LC-10 MONO £4.49.

ALL OUR PRINTER PRICES ARE INCLUSIVE OF LEADS

NEC 1 MEG 3.5" EXT. DRIVE, Low Power, Throughport, Slimline, Only £79.95

MARCONI * RB2 - TRACKER BALL - ONLY £52.00

TARGET RAM EXPANSION WITH CLOCK - ONLY £79.95

ACCESS VISA & STYLE WELCOME

Please note, all our prices include VAT & Courier Delivery.
All hardware items despatched within 24 hrs, dependent on availability & cheque clearance, prices subject to change without prior notice at any time. Personal callers welcome.
We are open from 09.00 -17.30 Mon to Sat., Late night closing Friday 20.00. E&OE.

Disks Disks Disks Disks

NEW LOW LOW PRICES FOR THE NEW DECADE

LOCKABLE STORAGE BOXES

3 1/2"	40 Capacity	£4.95
3 1/2"	80 Capacity	£5.75
5 1/4"	70 Capacity	£5.75

3 1/2"

Quantity	10	25	100	1000
DS/HD 2Mb	£1.38	£1.38	£1.15	POA
135tpi 1Mb	£0.46	£0.44	£0.43	POA
DS/HD Preformatted	£1.50	£1.44	£1.38	POA

5 1/4"

Quantity	10	25	100	1000
DS/DD 1.6Mb	£0.46	£0.44	£0.42	POA

All prices include VAT and Carriage
All prices are per disk
All 3.5 disks come complete with labels
All 5.25 disks supplied with Write Protect tabs, labels and envelopes

NO QUIBBLE REPLACEMENT OR MONEY BACK GUARANTEE

MV

To:
Media Value
Venture House, Dept NCE
212-214 Farnham Road
Slough, Berks SL1 4YL

☎ (0753) 32445
Fax (0753) 511536

I enclose a cheque/PO for .....

My Computer is .....

PLEASE PRINT CLEARLY

Quantity	Description	Price
	TOTAL	

Name .....

Address .....

..... Post code .....

Tel ..... E&OE .....

CS0290

Amiga, but most indicators steer me to an ST for the widest choice of music sequencers.
Richard Watkins, Misterley, Shropshire.

An unfortunate situation. I can say with authority that most of your disks won't work if you buy an STE. Current PD library compatibility estimates suggest well over 50 per cent of public domain disks won't run with the STE. Monthly magazines are now testing prospective cover disk programs for compatibility with both machines.

The STE may be the newest machine from Atari, but there are still many thousands of earlier STs out in the field which must be catered for. Be aware, however, that the STE will become the standard ST machine and is the computer to buy if you're looking for an Atari. Soon the compatibility problems will be a thing of the past and everyone will be writing to support the new machine.

The ST with its built-in MIDI port is the first choice for musicians who want to experiment with sequencing, and there are lots of professional-quality packages available to get the most from these ports. Try *Sequencer One*, a superb sequencing package from Gajit's Music Software (061-434 2768) priced at £79, or the excellent *Prodigy* from The Digital Muse (01-586 3445) priced at £129.95.

HELP! Which computer?

I wish to upgrade from present C64 to either an Atari 1040STE or a 1Mb Amiga. I have done quite a bit of Commodore 64 programming – some of which is quite lengthy – and wish to remain with a type of BASIC as near as possible to the one I'm used to.

I'm sure that I read in *Express* that Atari BASIC is not very good, so which of the above computers do you think I should get? And which version of BASIC would be the best for me – requiring the least changing from the programs that I've already written?

I have no interest in games and the programs that I write are mainly for my own enjoyment as I am retired and writing programs provides an absorbing pastime.

Also could you recommend a suitable VGA monitor to use?
John Rosbottom, Wigan, Lancashire.

The ST's BASIC is widely regarded as being a slow and cumbersome implementation of the language which should be replaced as quickly as possible by anyone purchasing the machine. That said, and bearing in mind that your main use is for BASIC programming and that you already have Commodore equipment, I would advise you to stay with CBM and buy an Amiga. The Amiga is an excellent machine with a quality BASIC which although not the best on the market is certainly better than the Atari offering.

VGA is a display standard for the IBM-PC and its many compatibles and has nothing to do with either the Atari ST or the Commodore Amiga. For a very good monitor you could do worse than examine Commodore's own 1802 colour display. I know many Atari addicts who swear by the Commodore display. Available from suppliers of the Amiga, the 1802 costs around £200 discounted.

HELP! Library litigation?

My friend and I are considering setting up a public domain service to provide cheap public domain software at only £2 per disk. While looking through a PD catalogue, I noticed it said that you could copy and distribute the disks but you couldn't sell them. Would you please explain this to me as I don't really want to break any laws.
Gareth Hall, Westminster Park, Chester.

Public domain software is that which the author has said can be copied and distributed entirely free – that is without having to pay him/her anything for having the program. There are several clauses associated with all this copying and distributing however, the first of which states that you must not make a profit by selling the program.

If the author has declined to accept money for their work, it's only fair that you don't either, merely for copying and passing it on. You must not change the program in any way and must include any information and data files associated with the software. This is to stop anyone changing just a small part of the program and claiming sole authorship.

Right, so how does anyone make a living from running a PD library? Well, although you're not allowed to make a profit from the software, you can make a small profit from the sale of the disk upon which the software is stored, and for the electricity and time and effort invested by you during the copying process, and this is indeed how many PD libraries form the sole income of their librarians.

There's also one other type of software which falls somewhere between the PD ideal and commercial offerings – shareware. Shareware is software which can be copied and distributed at will, but if the recipients decide that they like the programs and will make extensive use of them, then they must make a donation to the author.

Sometimes the amount of this donation is a fixed sum decided by the author, sometimes it is just how much the recipient thinks the program is worth. Although shareware is exceptionally popular in the United States among authors and users alike, here in the UK the idea has not yet fully caught on. Users are reluctant to part with their cash. This has lead to many shareware programs being re-released here as commercial software.

If you want to set up a public domain library and sell the disks at £2 each, go ahead! You'll be one of the cheapest libraries doing so, and will probably enjoy a large amount of custom. It's perfectly reasonable to send for other libraries' disks, copy them and include them in your own library. Many librarians may moan at this because they've invested much time in garnering their own collections, but as they don't actually own the software, you're at liberty to copy their disks at will. Treat the software with respect, abide by the unwritten rules of the PD concept and have a good time.

HELP! Trusty Tandy

After recently blowing the dust off my trusty Tandy DMP105 printer I have got it to work again. It used to be hooked up to my TRS80 model 1 computer, but now I have an Atari 520STFM and I was wondering if it would be possible to connect the DMP105 to my ST? If so, would I be able to use it to do screen dumps and to output from DTP packages?

It's only a 7-pin device so I'm a little worried that it won't work.
James Roskell, Blackpool, Lancashire.

You can indeed connect your DMP105 printer to the Atari 520STFM but you'll probably have to make up a printer driver in order to get it to produce bit-image graphics dumps from desktop publishing packages and screen dumping programs. It will work perfectly well as is however, with word processors and other software in straight ASCII mode. Most of the popular packages requiring printed output, such as *1st Word*, enable you to create a printer driver to suit your particular model.

If the prospect of digging out obscure printer codes appalls you, have a look through some public domain catalogues. Many libraries stock a range of printer drivers to suit forgotten printers. The Tandy device was a popular printer a few years ago, so someone may have put together a suitable driver. One of the better libraries is that run by Mike Goodman. Contact Goodman PDL on 0782 335650 for a copy of their latest catalogue. ■

HELP! Patching up a PCW with some extras on the cheap

I own a PCW8256 which suits me just fine, but I would like two things. Firstly more memory and secondly, a disk drive using cheaper disks. Now I know my heart's desire may be purchased with wads of money but it occurs to me that perhaps I might be able to get the requisite chips cheaper from another source, but where? Please let me know.

And I notice that 3.5-inch drives are cheaper when not advertised in dedicated PCW magazines. I read that CP/M can run these drives without problems, but can I get the connectors to attach it to my PCW? I have full instructions for these projects from another magazine, but no sources.
Jonathan Guyver, Penryn, Cornwall.

• Patch in those memory chips!

Your heart is about to receive its desires! It is perfectly possible to buy memory chips, drives and all other bit and pieces computerish from third-party sources, usually making a vast saving in the process.

Memory chips? Call Maplins Electronics on 01-748 0926. This company is a respected supplier of all kinds of electronic components and stocks a vast quantity of memory chips (256K DRAMs are currently under £1).

As for a disk drive, Evesham Micros (0386 765500) sell several 3.5-inch drives. Although not intended for use with your PCW (the cheapest currently is that for the Atari ST), these are standard drives that will connect to any micro able to support a drive of this format. The device comes with a separate power supply and a standard 34-way edge IDC connector. If the project instructions you have require a different connector Maplin is again the supplier to contact.

EXPRESS DELIVERY

SUBSCRIBE NOW to Britain's biggest and best computer weekly!

AND GET 54 ISSUES FOR £34.95

Fill in the form below including your credit card number, or send it with a cheque, made out to Future Publishing to:

Express Subscriptions, The Old Barn, Somerton, Somerset TA11 7PY

NAME .....

ADDRESS.....

..... TELEPHONE NUMBER .....

ACCESS/VISA NUMBER .....

Magnum Opus

I am writing to inform all Opus Discovery owners that there are cheaper ways of getting these repaired than sending them back to Opus.

I help to run a user group for this disk drive, and have had two people ring me up to tell me they have been told it will cost £100 to repair the device. This is ridiculous, as VSE Technical Services will repair the drive for £21.90.

One of our new members who actually sent his unit to Opus was sent a letter telling him he had three choices: to send £115 to have it repaired, to send £15 to have it returned or that they would dispose of it for him. This is not the treatment I would expect from a manufacturer the size of Opus.

The address of the Spectrum Discovery Club is SDC, 57 St Saviours Road, West Croydon, Surrey CR0 2XE.
B D Mumford, West Croydon, Surrey

Good grief! Is there anything going that doesn't have a club for users?

When I'm 64

I am fed up with the attitude taken towards 8-bit micros and, in particular, the Commodore 64 (of which I am an owner). You are treating the 64 as if it is totally dead. It used to be worth half a page (if not a full page) in the Your Format section, and now it is lucky to get a quarter.

The Archimedes gets more than that, and has much less than half the user base of the 64. I am not saying that it deserves a full page purely because I have one but because more people have them than have, as an example, Amstrad CPCs (page 15 same issue).

There is much more life in the old dog yet, even though at eight years old it is positively ancient technology compared with RISC, CD-ROM (but even a form of that is available on the 64), 80486s, etc.

Please, please give the 64 more coverage or I, and many other 64 owners in Carlisle with whom I am acquainted, will stop buying *Express*.
D Robinson, Brampton, Cumbria

I am prepared to review the amount of coverage given to the machine. If there is enough interest among readers, and if coverage would not simply double the number of games covered, it could be an idea. All thoughts welcome.

An engineer told me

You were a little harsh with Philip Atkinson (*The man who wanted to convert his TV to a monitor – Ed*) in the Tech Tips column. Encouraging technophobia solves no problems, and there is not a 'qualified' TV engineer who was not a beginner once.

Everyone involved with computers should know about the dangers of the EHT circuits. There is a line-output valve or transistor connected to a line-output transformer ('loppity'), which feeds via a stick-rectifier to the body of the cathode-ray tube. You can see the thick wire – often coloured red – going to a plug on the tube body. All these parts are very dangerous indeed.

In a black-and-white system the voltage is usually about 7,000. Colour systems may have as much as 25,000 volts and may use a voltage multiplier in place of the stick-rectifier. The danger is that you do not need to touch these parts to be killed. The voltage may jump at you if you approach to nearer than four inches.

The simple answer is to switch off. Leave the set for at least half an hour. The stick-rectifier is a one-way device, so the electricity can get into the tube but may take a long time to escape. I once had a shock off a disconnected tube five months after it was removed from a set and put on the shelf!

Silly 'engineers' sometimes play around, drawing long sparks from the EHT. This is crazy – it makes the loppity and output transistor overheat, causing premature failure.

If you see a thick coating of dust and grease on the EHT circuits, you will know that the set needs a clean-up. If you have family around you, put the mains plug in your pocket so that nobody can plug it in acccidentally and kill you.

Clean the EHT cable, stick-rectifier and loppity with tissues moistened in iso-propyl alcohol (obtainable from a chemist). If there is a grey electrically-conductive paint on the outside of the tube, do not treat this area. Use a dry rubber glove to avoid shocks.

After the alcohol has evaporated, you can try the set. I recently saved a TV set that was on its last legs. The picture was jumping and the circuitry was buzzing and overheating – all because of a build-up of grime.

Further, if you are upgrading the memory of a PCW 8256 you will need to be able to identify the EHT circuits so as not to get hurt.

You can also tell if grime is accumulating. A clean-up every three years might be advisable – but not more frequently.

Philip Atkinson was right when he suggested converting a TV into a monitor – this has been done. In the early Eighties there was such a fashion for this that most electronics magazines published their methods. Manufacturers noticed the trend, and most of them brought out a range of combined TV-monitors.

Not all sets are suitable. Only those with an isolating transformer can be converted economically. These often have an earphone socket and a 12V car-battery input. You need the full type-number of the set. Sony is a maker, Trinitron is a kind of tube. The type-number is usually a small panel on the back of the set.

The full circuit diagram for virtually all sets is obtainable from Newnes Radio and TV Servicing. Holborn library in London has this.

Wireless World (now *Electronics World* and *Wireless World*), *Practical Television* (now *Television Magazine*) and the defunct *Electronics and Computer* all had articles on conversions. However, I do not think they would take too kindly to enquiries of this kind. Best look for back-numbers in libraries.

The makers of conversion kits may no longer make them. These kits involved a small panel to be fitted, but the fashion has passed.

The Trinitron tube is a low-resolution device designed for viewing at a distance. Computer monitors are designed for close viewing. Amstrad took a lot of stick when it fitted the cheapest tubes to its PC 1512 colour computers. Even if converted, the Sony Trinitron would only give quality approaching the 1512.

The BBC Model B has a built-in colour RF modulator which gives just enough blurring to avoid the moiré ➤

EXPRESS MAiL

Britain's liveliest computing forum – packed with comment, controversy and conflict. Write and tell us what you think! Reach us at: *Express Mail, 30 Monmouth Street, Bath BA1 2AP*. Sorry, no personal replies. This week's replies written by Martyn Lester.

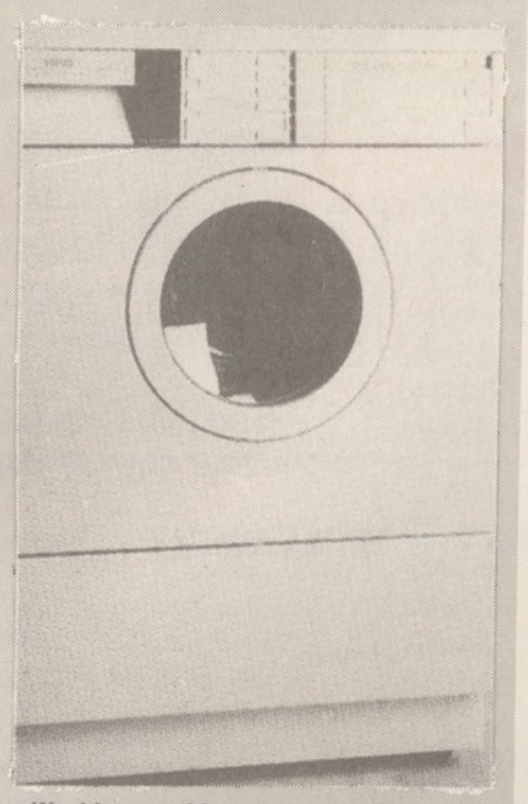
Unfortunately, some have a washer loose

Having read about the problems encountered by Marcus Turvey in *Express* 68, I felt that I must write in to explain my experience.

I had been using my new Commodore Amiga for several weeks when I too realised that I had made a mistake – what I really needed was a washing machine.

Being fairly accomplished in the use of a soldering iron, I began to make the necessary alterations to the computer. I attached two hosepipes to the joystick ports and cut a hole in the keyboard casing to put the washing in.

My Amiga is now rendered useless, and my guarantee is invalid. So I too am left with nothing (except third degree burns to my chest, hand and face).
Jon Hawkins, Monmouth, Gwent



• Washing machine or computer?

I hope this isn't going to turn into a 'my Amiga is better than your fridge' debate. Readers may feel there is a startling resemblance between this writer and the author of the other letter on this page. I wonder if they are in any way related?

fringes that would appear. Conclusion – honestly, why bother? Why run around seeking diagrams and parts, then risk your life and end up with a second-rate monitor? You may even spoil a nice telly.

If you must have a monitor, best look for a second-hand Microvitec monitor in the adverts in *Express*. It will probably be the best and cheapest option.

Charles Wehner, Blaenau Ffestiniog, Gwynedd

Thanks for the advice. I hope that careful readers are able to extend the life of their equipment by following it.

I must leap to Uncle Techtip's defence, because I know that he feels he is under a moral obligation not to set people off on a job which he considers, from his assessment of their letter, that they would bungle. This applies particularly if some risk to personal safety would be involved.

It is unfortunate if his response to that particular letter has come across as technophobic. I think he would be one of the last people on the planet that might be accused of technophobia, and the bulk of his pages each week are as clear an indication as one might wish that we would encourage people to make the most of their technology.

It may seem rather paternalistic of us, be we do tend to draw a line between people who say 'I know I need to do A, B and C, but can you tell me if this is an occasion where pin 1 should be connected to pin 4 or to pin 6?' and letting loose people who give no indication that they could wire up a three-pin plug on a job that requires some degree of caution.

We are not quite as cruel as you may imagine, because we took the liberty of inventing the name 'Philip Atkinson' to protect the real author from the jibes of his peers.

That people who try thoroughly stupid things do exist was amply illustrated by the letter a couple of weeks later from Marcus Turvey ("an electronics technician by trade") who trashed his computer by attempting to fit totally incompatible custom chips. And speaking of him...

Competition chaos

Late one Wednesday night, with rain lashing against the windows, an ST owner was going through his back issues of *New Computer Express* when, to his horror, he discovered a competition that he hadn't entered (*Express* 55).

As he browsed through the questions, thinking of how stupid he was not to have entered, he came across question 9: 'What is the charge of an electron?' Answers available:

A. £15 an hour
B. Gross indecency
C. Negative

The ST owner in question thought to himself: 'None of those are right'. He continued to think: 'The charge of an electron can be negative or positive!' When he got to school he asked his so-called intelligent friends if this was true.

(*He then rang up our Features Editor, said that we were a bunch of derek-heads for getting the answer wrong and asked for a prize for pointing this out, didn't he? – Ed*)

All you readers out there may be wondering why I referred to them as so-called intelligent friends, this is because looking through a chemistry book while writing this letter the ST owner has discovered that he has made a large mistake and that the electron is, in fact, negatively charged.

I guess there's not going to be a prize for being so stupid as to not enter an *Express* competition and for doubting the word of such a nice magazine?
Brett Wilson, Epsom, Surrey

Too right there isn't. Doubtless you and your pals were thinking of an electrode, which can either be positive (an anode) or negative (a cathode).

While we are on the subject of that competition, apologies are due to a number of readers who have not yet received their prizes (letters too numerous to print; red faces all round). Inheriting this has not been one of the fun parts of taking over the *Express* Editor's chair.

I am assured that by the time this issue goes to press all CRC virus killers will have gone out; adequate packaging has now arrived for the joysticks and cassette racks, which have been going into the post over the last few days; and Electronic Arts prizes have been sorted during this week and should be in the post within days.

Thanks to prize-winning readers for their patience, and rest assured that you will all receive your goodies.

Head case

I am writing to express my deep disappointment in your magazine due to your answer to my earlier letter which was written in regards the Psion Organiser.

I must tell you (so that you can right the wrongs) that my name is Derek Head, not Dick Head as you suggested in *Express* 69.

I also have a question (now that I have sold my Psion): what is the infinite credits cheat for the NCube laptop version of *Elite*?
Derek Head

It did seem a good guess as to what the D stood for, but I stand corrected. Send us your NCube and we will check the problem out for you.

Stars on Tuesday

This being my first ever letter to a magazine I am pleased that it is in praise of a mail order company called Mediaware.

The story goes: Friday afternoon/evening – the time 5:05pm. Make telephone call to Mediaware; ask if they carry the Star LC10 printer in stock. Yes, they do have them in stock. Tell them I will phone them back. The time is now 5:15pm. I decide that I will order it.

It is the same person I spoke to earlier, the reason for this was explained. She and her colleague were the only ones there – everyone else had gone home. She was apologetic that my order could not be processed before Monday – but I would certainly get it Tuesday afternoon.

Well, you may say that you've heard that one before; so did I. But, arriving home Tuesday evening, I found that it was there and had arrived at 2:30pm approx.

I was well and truly over the moon, and if ever I want anything else they will get the order not only for their service but the way I was treated over the phone was a pleasant and enjoyable experience.
Mel Mayers, Macclesfield, Cheshire

I think readers must have given up moaning for Lent.

NEXT WEEK

MAC ATTACK
Are the Macintosh machines worth buying?

CPC CD
CodeMasters brings its excellent CD compilation over to the Amstrad format

GLEADOW SPEAKS
Atari's UK boss speculates on the company's future

PLUS

• The definitive Shopping Express guide to ST Essentials
• Tech Tips: technical advice with the human touch
• Letters: The best debate outside of Parliament

WITH

A column for your machine. Expert correspondents on ST, PC, Amiga, C64, Spectrum, Archimedes, BBC, MSX, QL, PCW, XE and CPC

AND

Six pages of up-to-the-minute news

STAY AHEAD WITH EXPRESS EVERY THURSDAY

MAKE SURE OF YOUR COPY OF NEXT WEEK'S EXPRESS

Hand this form to your newsagent
to get your copy of *Express* next Thursday

TO THE NEWSAGENT: Please deliver to me / reserve for me
(delete as applicable)
_____ copies of *New Computer Express*

NAME .....

ADDRESS .....

.....

.....

ATARI ST and AMIGA

Sixteen Bit Superdeals from the Sixteen Bit Specialists!

CUSTOMERS PLEASE NOTE! When comparing prices remember ours include fast delivery by courier.

NEW!!

520STE Power Pack
£359.00
Inc. VAT and Next Day Delivery

NEW STE

Power Pack includes:
★ 520STE 512K Keyboard with Built-in 1 Megabyte disk drive and TV Modulator
★ 4096 Colour Palette
★ 8 Channel digital stereo sound
★ 4 Joystick Ports
★ Over £550 worth of games software, including OutRun, Gauntlet 2, R-Type, Space Harrier, Super HangOn and 16 more Top Games
★ Organiser Business Software including WORDPROCESSOR, SPREADSHEET and DATABASE
★ First BASIC and First Music Utility Software
★ FREE JOYSTICK AND FREE MOUSE MAT WORTH £4.95
★ All leads, manuals PLUS MOUSE and free mains plug!

REMEMBER! Many ST's do not come with BASIC - ours come with ST BASIC REV D by Metacomco

520STE Explorer Pack
£279.00

NEW STE

★ Explorer Pack includes 520STE 512K Keyboard with built-in 1 Megabyte Disk Drive and TV Modulator.
★ 1 FREE Game, ST Tutorial and METACOMCO Basic worth £25.00.
★ All leads, Manuals PLUS MOUSE and FREE Mains Plug!
★ Free mouse mat worth £4.95.

1040STE BUSINESS PACK
£479.00

★ Includes the new 1 megabye 1040STE keyboard plus FIRST WORD wordprocessing software, SUPERBASE PERSONAL Database Software and NEOCHROME graphics package. Also includes Metacomco BASIC, Mouse Pad, all Leads, Manuals and Mouse.
★ 1040STE keyboard without software **£439.00**

MEGA 1 BUSINESS Pack
£529.00

Features:
★ Separate Keyboard and System Unit
★ Inc. all software supplied with 1040 STE Business Pack
★ Blitter chip installed for faster graphics
Inc SM124 Mono Monitor.....£628.00

ACCESSORIES

Quickshot II Turbo Joystick	£9.95	Branded Memorex 3.5" DSDD Disks	
Competition Pro 5000 Joystick	£13.95	Box of 10	£13.95
Competition Pro with Autofire	£14.95	Memorex Disk Box	
Konix Speedking Joystick	£11.95	For 40 3.5" Disks	£8.95
Red Mouse Mat with Amiga logo	£5.95	Amiga 1/2 Meg Expansion	£119.95
Plain blue Mouse Mat	£4.95	Control Centre Atari or Amiga	£44.95

Contriver Amiga and ST Mouse with FREE Holder and Mouse Pad £20.95

PRINTERS

Star LC24-10 24Pin incl. lead ST/Amiga	£249.00
Star LC10 including interface lead for ST/Amiga	£169.00
Star LC10 colour including interface lead for ST/Amiga	£219.00
Citizen 120D including interface lead for ST/Amiga	£159.00
Citizen 120D including interface lead	£139.00

SEIKOSHA 80 COLUMN PRINTERS - AMAZING PRICES

Seikosha 9 pin NLQ including interface lead for ST/Amiga	£139.00
Seikosha 24 pin LQ including interface lead for ST/Amiga	£239.00

AMIGA A500 BAT GAMES PACK
£399.00
Inc. VAT and Next Day Delivery

NEW!

BAT Games Pack includes:
★ Amiga A500 512K Keyboard with Built-in 1 Megabyte disk drive.
★ Free TV modulator worth £24.99 allowing you to use the Amiga with a normal TV.
★ DELUXE PAINT II GRAPHICS PACKAGE.
★ PHOTON PAINT II graphics package with animation worth £70.00.
★ FREE, only-just-released BATMAN - THE MOVIE games software.
★ NEW ZEALAND STORY arcade games software.
★ F16-INTERCEPTOR - amazing 3D flight simulator software.
★ A further £230 worth of Games Software, including BUGGY BOY, MERCENARY, BARBARIAN, WIZBALL & six more games.
★ FREE JOYSTICK, MOUSE MAT AND 10 BLANK DISKS.
★ Amiga BASIC, Amiga EXTRAS 1.3, Workbench 1.3 PLUS the Amiga Step by Step Tutorial.
★ All leads, manuals PLUS MOUSE and mains plug!

AMIGA 1 MEG BAT GAME PACK
£529.00

NEW!

1 Meg Bat Games Pack includes:
★ Fitted 1 Megabyte Memory Expansion + Real Time Clock Card
★ Everything listed for the A500 Bat Game Pack
★ DRAGON'S LAIR 1 MEG MEGAGAME!

AMIGA A500 CLASS OF THE 1990'S BUSINESS + EDUCATIONAL PACK
£549.00

FEATURES:
★ Amiga A500 + TV Modulator
★ Midi Interface + Software
★ Kind Words II word processor
★ Page Setter DTP
★ Super Base Personal Database
★ Maxiplan 500 Spreadsheet
★ Amiga Logo, BBC Emulator, Deluxe Paint II
★ Mouse mat, 10 blank disks and disk wallet

EXTERNAL DISK DRIVES

Atari SF314 1 Megabyte	£139.00
Amiga A1010 1 Megabyte	£109.00
Cumana 1 Megabyte Atari or Amiga	£89.95
NEC 1 Megabyte Atari or Amiga	£79.95
Atari Megafile 30 Hard Disk	£439.00
New! Commodore A590 20 meg hard disk	£369.00
A590 Hard Disk + Memory Upgrade installed	Phone

MONITORS

Commodore Amiga A1084 stereo Monitor inc lead	£269.00
Atari SC1224 Colour Monitor inc lead	£259.00
Atari SM124 Mono Monitor including lead	£119.00
Philips CM8833 stereo colour monitor inc. lead for ST or Amiga	£259.00

CREDIT CARD ORDERLINE ☎ 0908 378008 (Mon – Sat 9am – 6pm)

To order either call the orderline above with your Credit Card details OR make a cheque or P.O. payable to: Digicom Computer Services and send it with your order to the address below. Callers are also most welcome at the address below.

INSTANT CREDIT NOW AVAILABLE

DIGICOM

Unit 36, Wharfside, Fenny Stratford, MILTON KEYNES, MK2 2AZ.

Access VISA

All prices include VAT and delivery by courier
** Written details on request APR 34.5% Variable.*

DATEL ELECTRONICS

EXTERNAL 3.5" DISK DRIVE

- Slimline extra low profile unit - only 6" long!
- Top quality drive mechanism. Fully compatible.
- Throughport allows daisy-chaining other drives (Amiga only).
- A superbly styled case finished in computer colours.
- 1 meg unformatted capacity.
- Good length cable for positioning on your desk etc.

AMIGA VERSION SINGLE DRIVE
ONLY £74.99
ST VERSION
ONLY £89.99 WITH FREE OCP ART STUDIO

AMIGA ONLY **TWIN DISK DRIVE ONLY £129.99**

ADD £5 FOR COURIER DELIVERY IF REQUIRED

MICRO MIDI

- A simple low price MIDI Interface for the A500.
- All the features found on more expensive units. Fully compatible.
- MIDI In - MIDI Out - MIDI Thru.

ONLY £24.99

MIDI CABLE - 3 Metre Length
ONLY £6.99

REPLACEMENT MOUSE

- High quality direct replacement for mouse on ST/Amiga.
- Teflon glides for smoother movement.
- Rubber coated ball for minimum slip.
- Optical system counting - 500/mm.

SPECIAL OFFER - FREE MOUSE MAT + MOUSE HOUSE (WORTH £7.99).

ONLY £29.99
COMPLETE (STATE ST OR AMIGA)

GENISCAN GS4500 ST/AMIGA

- An easy to handle Handy Scanner featuring 105 mm scanning width & 400 dpi resolution enables you to reproduce graphics & text on your computer screen.
- Adjustable switches for brightness & contrast.
- Printout for Epson compatibles.
- With Geniscan you have the ability to easily scan images, text & graphics into the ST/AMIGA.
- A powerful partner for Desk Top Publishing.
- Powerful software allows for cut & paste editing of images etc.
- Save images in suitable format for most leading packages including DEGAS, NEOCHROME, FLEET-STREET, DELUXE PAINT, PHOTON PAINT, etc.
- Unmatched range of edit/capture facilities not offered by other scanners at this price.

SPECIAL OFFER
COMPLETE WITH PHOTON PAINT FOR ONLY £169.99
INCLUDING HARDWARE/SOFTWARE

1MEG INTERNAL DRIVE UPGRADE

- Replace internal 500K drive with a full 1 meg unit.
- Top quality drive unit.
- Full fitting instructions.
- Easily fitted, no special skills required.
- When considering a drive replacement remember that quality is most important.

ONLY £69.99

512K MEMORY EXPANSION

- Now with this superb 512K expansion unit you can simply plug in more memory. Bring your Amiga up to 1Meg Ram in seconds!!
- Buy direct from the manufacturer and save!

ONLY £84.99 COMPLETE
ONLY £99.99 FOR VERSION WITH CLOCK/CALENDAR COMPLETE

1 MEG RAM UPGRADE KIT

- 512K of FASTRAM to bring your 520 STFM up to a full 1040K!!
- Fitting is a straightforward soldering job - achieved by anyone who has a little experience.

ONLY £79.99

UP TO £1000 CREDIT NO DEPOSIT

Why not apply for a Datel Charge Card and spread the cost of your purchases. For example, you can spend £240 for only £8 per month OR £480 for only £20 per month

RING OR WRITE NOW FOR APPLICATION FORM AND FULL WRITTEN DETAILS

512K RAM EXTENSION CARD

- Available with/without calendar/ clock option.
- Simply plugs internally into A500 slot.
- Switch in/out with switch supplied.
- Fitted in minutes - no soldering etc.
- Accepts 41256 DRams (zero K RAM fitted).
- Battery backed to retain time/date.

ONLY £19.99
ONLY £34.99 FOR VERSION WITH CLOCK/CALENDAR

NB THESE PRICES DO NOT INCLUDE RAM CHIPS.

ALL ORDERS NORMALLY DESPATCHED WITHIN 48 HRS

HOW TO ORDER ...

BY PHONE	BY POST	FAX
0782 744707 24hr Credit Card Line	Send cheques/POs made payable to "Datel Electronics"	0782 744292 UK ORDERS POST FREE EUROPE ADD £1 OVERSEAS ADD £3

PRICES AND SPECIFICATIONS CORRECT AT TIME OF PRESS AND SUBJECT TO CHANGE WITHOUT NOTICE

CALLERS WELCOME - Please reserve goods by telephone prior to visit.

DATEL ELECTRONICS

DATEL ELECTRONICS LTD., FENTON INDUSTRIAL ESTATE
GOVAN ROAD, FENTON, STOKE-ON-TRENT, ENGLAND.

SALES ONLY	TECHNICAL ONLY
0782 744707	0782 744324